

NEW JOB AND INTERVIEW ALERT THROUGH SHORT MESSAGE SERVICE (SMS)

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Declaration

In accordance with the requirements of the degree of Bachelor of Computer Science and Engineering in the division of Computer Science and Engineering, I present the following thesis entitled “*New job alert and interview message alert through short message service (SMS)*”. This work was performed under the supervision of Dr. Sayeed Salam.

We hereby declare that the work submitted in this thesis is our own and based on the results found by ourselves. This thesis, neither in whole nor in part, has been previously submitted for any degree.

Signature of
Supervisor

Signature of
Author

Acknowledgement

I would like to express my sincerest appreciation and profound gratitude to my supervisor Dr. Sayeed Salam, Chair Person, Department of Computer Science and Engineering, BRAC University, for his supervision, guidance. In the course of the project development he discussed problems. He helped to overcome hurdles. His keen interest and valuable suggestions and advice were the source of all inspiration to us. I would like to thank BRAC University for helping with all the required resources for completion of the thesis work.

Abstract

Searching Job online is very popular in Bangladesh. There are many job sites in Bangladesh where different types of jobs are available. Seekers become a member by filling up the resume and browses the jobs. They can get their suitable jobs from here. If he wishes to apply he can easily apply for the post. The company will return the result through the personal email or postal address that given in the seekers resume.

Our country's job sites are unlike other developed countries. Jobs are searched using mobile and also can be applied through mobile in the developed countries. So job sites in our country are behind on this new technology. So we are here introduced a new features SMS facility which gives alert in different times. The recent growth and infrastructure of cell phone allows making this feature popular. Seekers first signup the site with his cell phone number and when new job is available that meet his criteria, specialization and education, new job alert SMS will send to him. So he does not need to surf the net again. He can easily get all updated information about jobs using cell phones. Seekers can get all details about the new job instantly from the cell phones using SMS facility.

This system helps people to know about jobs market from reliable media mobile network. He also gets the interview alert along with other message alert from SMS. Using SMS facility people can easily find out their desired job and this SMS make this job site very effective and time saving.

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Chapter 1

Introduction

1.1 Overview

Some days ago jobs searching was not a very easy task. People have to check newspaper everyday. Now with the blessings of the Internet technology, many job sites are giving services to the job seekers from which they can find job news easily. It's now the era of job search online. We can easily find part time or full time jobs by visiting different job sites of different countries. In Bangladesh we have some sites from where we can easily find our suitable jobs. Many developed countries like India, Australia, Malaysia, UK, and USA and so many have developed their sites for mobile users.

In our neighboring country India, a very popular job site www.naukri.com gives its members the opportunity to search for jobs by cell phone. Just the members have to send a SMS by typing "NAUKRI" to 676761. Once the SMS is sent, the sender will receive "Welcome to Naukri Job Search."

In a Malaysian web site named www.jobsmobile.com where a person can easily find jobs, get Short Message Service (SMS) alert for new jobs, get confirmation SMS from the sites. Hence SMS search support free text search. User no longer needs to remember the area code or rules when using the service. Our country has many job sites but like other developed countries these sites are not introduced the SMS facility.

Chapter 2

Current System

There are many job sites in Bangladesh like www.bdjobs.com, www.jobsbd.com, www.jobsa1.com, www.anyworkanywhere.com, www.4icj.com and many more. Among all those job sites www.bdjobs.com is pioneer job sites in Bangladesh. www.bdjobs.com is the largest job sites in Bangladesh. It has over 3 million job seekers and more than 20,000 corporate customers. In this site we can find jobs under different categories. Two types of people use this web site: one who is looking for a job and second the company authorities, who will post jobs that are available in their company. Apply online has the following steps:

- Create a user account for further assistance by posting resume in their database.
- Choose jobs that are available in the sites.
- Apply online by posting resume against the chosen job.

A company comes and post new jobs with sufficient information like job requirements, qualifications, application deadline, salary, and working place with other necessary details. After the deadline, company check its own account and sort out all resumes that have been applied for posts and finally select some resumes and send message to their selected applicants for an interview.

Job seekers then log into their account by giving their username and password and check whether any new messages come or not. The message includes the interview confirmation, location of the interview. So company and job seekers get helps visiting these job sites. Almost all the jobsites in our country only allowed for the jobs that are available in Bangladesh. Most recent and dignified jobs are linked in the home page which is known as HOTJOBS from where the seekers can directly move to their company sites and find all details information and apply for that if suitable so.

Though www.bdjobs.com is largest job site in our country but they have some lacking with respect to other job sites all over the world. Many job sites use SMS technology to alert their members with new job information, interview messages, etc. But any job sites in our country don't give this facility. So our proposal overcomes this lacking. Now in the existing system we can easily find jobs, post new jobs, and find the confirmation all are done in sites. But here we are developed some new features that will help to get all these features from mobile sending SMS. Our goal is to develop a system, which will be able to send SMS from site to the members cell phone.

Chapter 3

Proposed System

Our main target is giving SMS facilities to job seekers so that no one misses any opportunities. Now mobile is a very available handy device to everyone. We will introduce new features from where applicants easily get the updated information through cell phones. Our system now developed for all Information Technology related jobs. In the starting, we gathered job info from some developed countries. It has also the facilities to submit jobs from any other country.

3.1 Initial Setup of the System

3.1.1 Applicant's registration

An applicant must be a valid member and for that he has to fill up resume forms.

3.1.2 Company registration

Company need to be registered to post jobs. The company must be verified by a professional organization.

3.1.3 SMS server

Our SMS server must be on for 24 hours. This server always searches for any updates.

3.2 Job posting process:

3.2.1 Employer authentication

An employee must be registered before posting for new jobs. For that the company has to use credit cards to use our web sites.

3.2.2 New job alert

This is the first alert in our system. Our system will begin with this alert. When company posts a new job it will be store in our databases. SMS will be send to the users who is qualified for that post particularly.

3.2.3 SMS criteria

The company requirements must match with any of seekers resume. Our database will match and find out those cell no and send SMS one by one.

3.2.4 SMS delivery notification

If the SMS is successfully send to seekers success option will be shown in our running server.

3.2.5 Invalid notification

If the SMS is not send it will show that invalid recipients no in the server.

3.2.6 SMS recording

Successful users will be recorded in our database server accordingly.

3.2.7 Show details SMS

When the user get the SMS about the new job he/ she will would like to see the details of that job. For that he needs s to type “<Details> <Job Id>” and sends to the GSM device, which is connected with our server.

3.2.8 Return details

The server will return to that user with the details information about that particular job.

3.2.9 Apply for jobs

Now in our system applicants can easily apply for that post from cell phones. Just type “Apply <User Name> <Job ID>”. After sending this SMS, the resume of the sender will be automatically submitted to the specified job.

3.2.10 Interview alert

Company checks resumes and would like to call or the interview. The interview alert will be send to the applicants.

3.2.11 Other Message Alert

After giving the interview the company wants to recruit him and call for the second interview than company will type a message and that message will be send to that applicants.

3.3 Result Generation:

After applying for any post the applicants will get the updates news. When the applicant applies the information will be stored in the databases and retrieve from that database when it needed in the future.

Chapter 4

About SMS

4.1 Definition

Short message service (SMS) is a globally accepted wireless service that enables the transmission of alphanumeric messages between mobile subscribers and external systems such as electronic mail, paging, and voice-mail systems.

4.2 General Information

SMS appeared on the wireless scene in 1991 in Europe. The European standard for digital wireless, now known as the Global System for Mobile Communications (GSM), included short messaging services from the outset. In North America, SMS was made available initially on digital wireless networks built by early pioneers such as BellSouth Mobility, PrimeCo, and Nextel, among others. These digital wireless networks are based on GSM, code division multiple access (CDMA), and time division multiple access (TDMA) standards.

Network consolidation from mergers and acquisitions has resulted in large wireless networks having nationwide or international coverage and sometimes supporting more than one wireless technology. This new class of service providers demands network-grade products that can easily provide a uniform solution, enable ease of operation and administration, and accommodate existing subscriber capacity, message throughput, future growth, and services reliably. Short messaging service center (SMSC) solutions based on an intelligent network (IN) approach are well suited to satisfy these requirements, while adding all the benefits of IN implementations

Figure 1 represents the basic network architecture for an IS-41 SMSC deployment handling multiple input sources, including a voice-mail system (VMS), Web-based messaging, e-mail integration, and other external short message entities (ESMEs). Communication with the wireless network elements

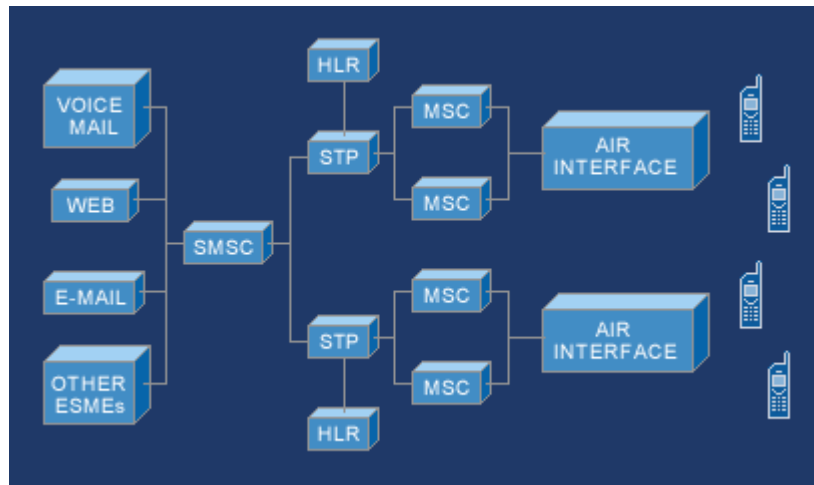
such as the home location register (HLR) and mobile switching center (MSC) is achieved through the signal transfer point (STP).

SMS provides a mechanism for transmitting short messages to and from wireless devices. The service makes use of an SMSC, which acts as a store-and-forward system for short messages. The wireless network provides the mechanisms required to find the destination station(s) and transports short messages between the SMSCs and wireless stations. In contrast to other existing text-message transmission services such as alphanumeric paging, the service elements are designed to provide guaranteed delivery of text messages to the destination. Additionally, SMS supports several input mechanisms that allow interconnection with different message sources and destinations.

A distinguishing characteristic of the service is that an active mobile handset is able to receive or submit a short message at any time, independent of whether a voice or data call is in progress (in some implementations, this may depend on the MSC or SMSC capabilities). SMS also guarantees delivery of the short message by the network. Temporary failures due to unavailable receiving stations are identified, and the short message is stored in the SMSC until the destination device becomes available.

SMS is characterized by out-of-band packet delivery and low-bandwidth message transfer, which results in a highly efficient means for transmitting short bursts of data. Initial applications of SMS focused on eliminating alphanumeric pagers by permitting two-way general-purpose messaging and notification services, primarily for voice mail. As technology and networks evolved, a variety of services have been introduced, including e-mail, fax, and paging integration, interactive banking, information services such as stock quotes, and integration with Internet-based applications. Wireless data applications include downloading of subscriber identity module (SIM) cards for activation, debit, profile-editing purposes, wireless points of sale (POSs), and other field-service applications

such as automatic meter reading, remote sensing, and location-based services. Additionally, integration with the Internet spurred the development of Web-based messaging and other interactive applications such as instant messaging, gaming, and chatting.



Picture 1. Basic Network Architecture for an SMS Deployment (IS-41)

4.3 Benefits of SMS

In today's competitive world, differentiation is a significant factor in the success of the service provider. Once the basic services, such as voice telephony, are deployed, SMS provides a powerful vehicle for service differentiation. If the market allows for it, SMS can also represent an additional source of revenue for the service provider.

The benefits of SMS to subscribers center around convenience, flexibility, and seamless integration of messaging services and data access. From this perspective, the primary benefit is the ability to use the handset as an extension of the computer. SMS also eliminates the need for separate devices for messaging because services can be integrated into a single wireless device—the

mobile terminal. These benefits normally depend on the applications that the service provider offers. At a minimum, SMS benefits include the following:

- Delivery of notifications and alert
- Guaranteed message deliver
- Reliable, low-cost communication mechanism for concise information
- Ability to screen messages and return calls in a selective way
- Increased subscriber productivity

More sophisticated functionality provides the following enhanced subscriber benefits:

- Delivery of messages to multiple subscribers at a time
- Ability to receive diverse information
- E-mail generation
- Creation of user groups
- Integration with other data and Internet-based applications

The benefits of SMS to the service provider are as follows

- Ability to increment average revenue per user (due to increased number of calls on wireless and wire line networks by leveraging the notification capabilities of SMS)
- An alternative to alphanumeric paging services, which may replace or complement an existing paging offer
- Ability to enable wireless data access for corporate users
- New revenue streams resulting from addition of value-added services such as e-mail, voice mail, fax, and Web-based application integration, reminder service, stock and currency quotes, and airline schedules
- Provision of key administrative services such as advice of charge, over-the-air downloading, and over-the-air service provisioning
- Protection of important network resources (such as voice channels), due to SMS' sparing use of the control and traffic channels

- Notification mechanisms for newer services such as those utilizing wireless application protocol (WAP)

All of these benefits are attainable quickly, with modest incremental cost and short payback periods, which make SMS an attractive investment for service providers.

4.4 The Mobile Device

The mobile device is the wireless terminal capable of receiving and originating short messages. Commonly, these devices have been digital cellular phones, but more recently the application of SMS has been extended to other terminals such as POS, handheld computers, and personal digital assistants (PDAs). The wireless network-signaling infrastructure is based on SS7. SMS makes use of the mobile application part (MAP), which defines the methods and mechanisms of communication in wireless networks and employs the services of the SS7 transactional capabilities application part (TCAP). An SMS service layer makes use of the MAP signaling capabilities and enables the transfer of short messages between the peer entities.

The capabilities of the terminal vary depending on the wireless technology supported by the terminal. Some functionality, although defined in the SMS specification for a given wireless technology, may not be fully supported in the terminal, which may represent a limitation in the services that the carrier can provide. This trend, however, is disappearing as service providers' merger and acquisition activity demands uniform functionality across all the constituents of the parent companies. Also, some manufacturers may include additional functionality, not considered in the specification, attempting to offer a more attractive product for service providers as well as end users. This will be the case more often as service provider continue to incorporate SMS into their revenue-generating and customer-loyalty strategies.

4.5 SMS Applications

SMS was initially designed to support limited-size messages, mostly notifications and numeric or alphanumeric pages. While these applications are and will continue to be widely used, there are more recent niches that SMS still can exploit.

Short bursts of data are at the heart of many applications that were restricted to the world of data networks with fixed terminals attached to a local-area network (LAN) or wide-area network (WAN). However, many of these applications are better served if the data communication capabilities could be added to the mobility of the station. Thus, a waiter who can charge a customer's credit card right at the table, at any time, instead of going to a fixed POS terminal located by the register will be able to help customers in a faster, more convenient way.

Also, the ability to track the location of a moving asset such as a truck or its load is very valuable for both providers and clients. This application, again, just needs to interchange small amounts of information, such as the longitude and latitude at a current time of the day, and perhaps other parameters like temperature or humidity.

This application does not necessarily require the monitored entity to be in movement. The requirements are basically short, burst data and a location that has digital network coverage. For example, in a neighborhood, it would be faster, easier, and cheaper to drive a truck from the local power company, which interrogates intelligent meters to obtain their current readings and then forwards them via short message to a central data processing center to generate the billing. Similarly, delivery trucks could be alerted of the inventory of a customer running low, when the truck is close to the customer's facilities. The truck driver could place a quick phone call to the customer to offer a short-time replenishment at a low cost for the distributor.

Another family of applications that can use SMS as a data transport mechanism is banking. It is no secret that automated teller machine (ATM) and Internet transactions are less costly than transactions completed at a branch. Internet transactions are even cheaper than ATM transactions. Therefore, enabling wireless subscribers to check their balances, transfer funds between accounts, pay their bills and credit cards is valuable, not only for the subscriber but also for financial institutions.

Entertainment applications are also good drivers of SMS usage. Examples of these are simple short message exchanges between two parties (“texting”) or between multiple participants (“chat”). Also, delivery of information that the subscriber can tailor to his or her lifestyle represents an attractive proposition for wireless users.

Wireless Web browsing allows the users to search for information without the physical restrictions of a PC. College students certainly appreciate not having to go to the computer lab or their dorm to check e-mail or find out what the required book is for the semester that is about to start.

E-mail continues to be by far the most used wireless data application. However, handsets are evolving quickly and are including more and more functionality that supports newer applications at the same time that user friendliness increases. Probably the next big success beyond wireless Web will be Internet shopping and other e-commerce applications such as electronic coupons, advertising, etc.

The potential for applications is enormous, and new needs appear to arise constantly, demanding a solution that may travel over SMS.

Chapter 5

*System
Development*

5.1 Division of Works

In this project, we divide total works into four different parts: Logic Design, Database Design, Website Design and SMS sending & receiving.

5.2 Logic Design

The logic design is the starting point of every project. In this design, it is been planned how the works will be done. All the works are summarized and revised. Some models were built in this section. Few of them were deleted and few were selected. Some of the models were rebuilt after discussion. After a hard working session of searching of websites, some of the major problems were pointed out those can cause in a very bad manner if SMS is included in the project. So, those cases were kept in mind. Our main concern was to select how to send SMS and what type of alerts should be made to gain the maximum output.

5.3 Database Design

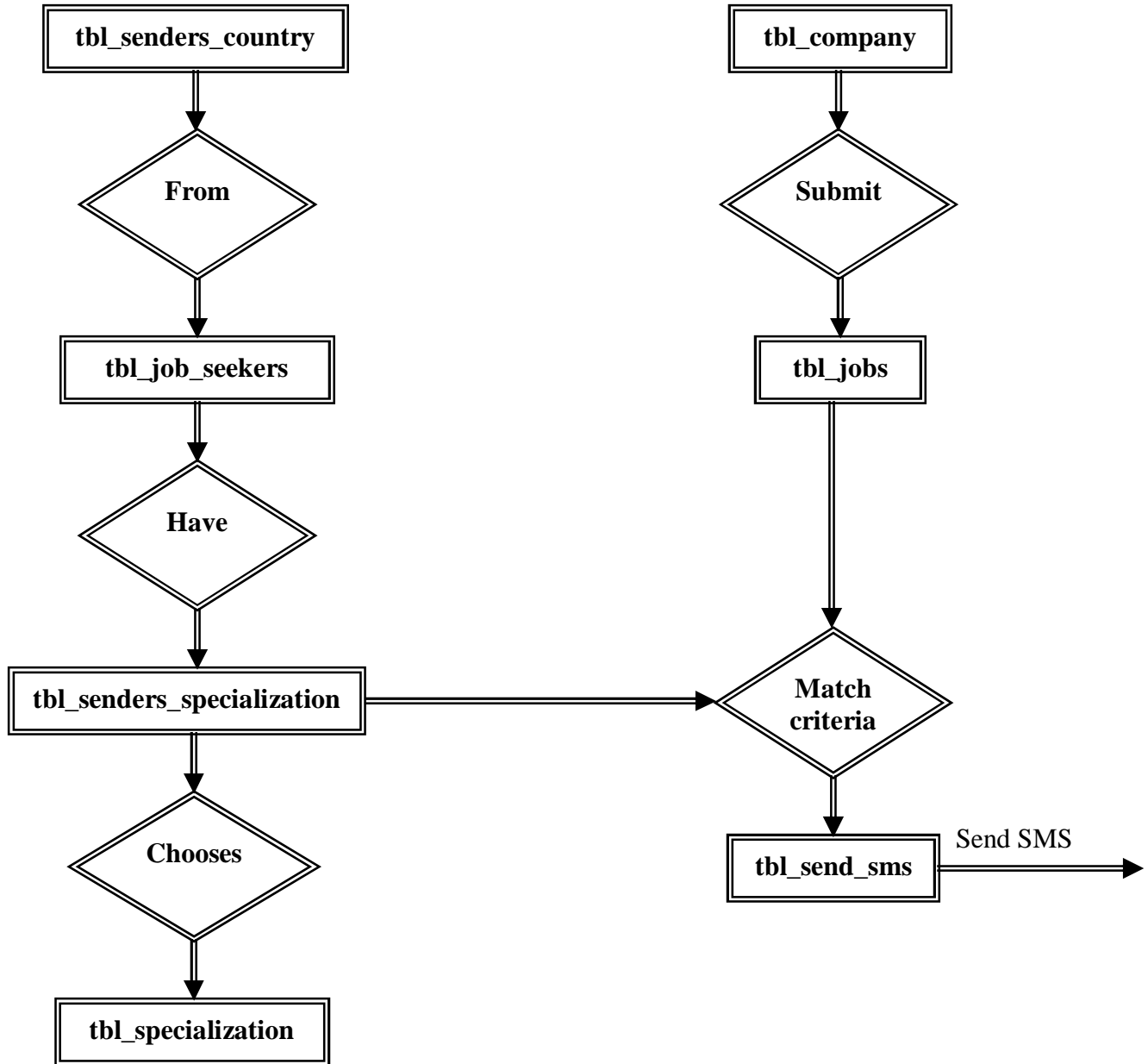


Figure: Website operation and sending SMS

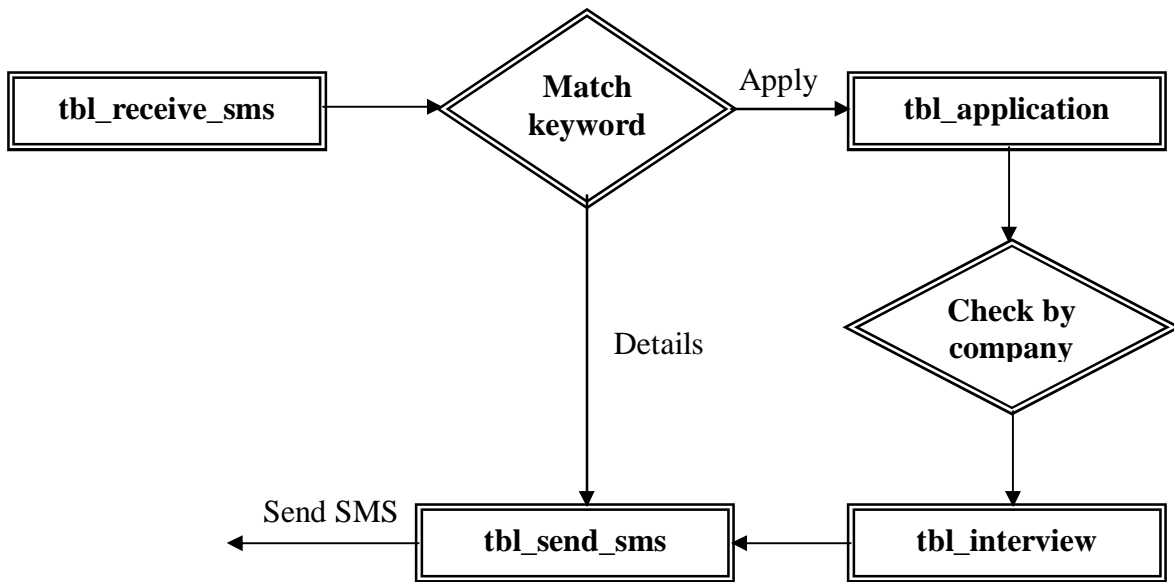


Fig: Sending SMS depending after retrieving SMS from GSM device

5.4 Website Design

5.4.1 Developing the site

To start working we have to visit many job sites and show all features that added in their sites. Our site consists of many pages, which work for different purposes. This important technique, serving as an alternative to the traditional job-hunt, which provided a good overview. We have developed a personal database driven website which currently runs on local host. To manipulate the database we use PHP & MySQL database is used in the back-end. To build the website we use following development tools.

- PHP 5
- MySQL 4.0.12
- Macromedia Homesite 5
- Macromedia Dreamweaver MX
- SQLyog
- Adobe Photoshop CS2

5.4.2 Home page

In the home page, there exists different log in options for the job seekers and company employee. Also browser of this site can watch the available jobs in different countries provided by the website. The new users can create account with posting their resume. There is an option for the seekers to search jobs according to the keyword.

5.4.3 Keyword search

Being idle user can easily check about the jobs by typing their desired key word in the white blank box at the right upper corner. This search will return results that are typed in.

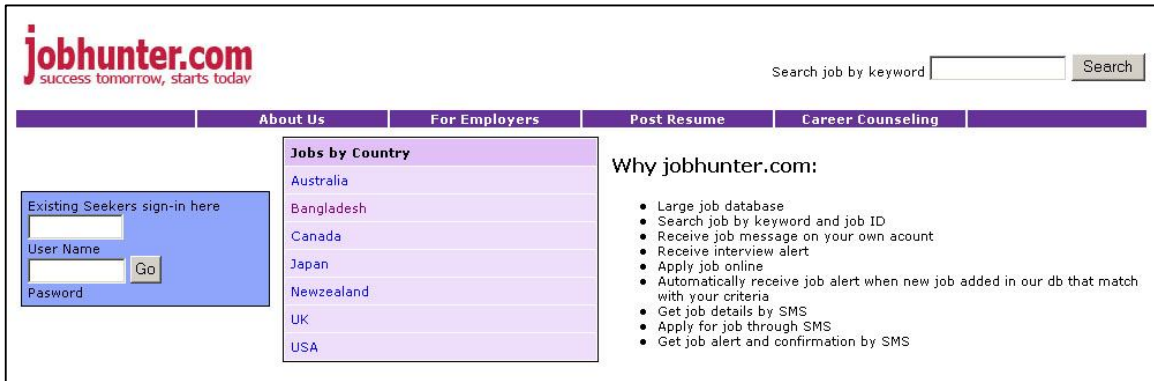


Figure: Homepage of the website

5.4.4 Company Section

For Employers: By clicking this link, anybody can move to the company log in page. This s where company will log in before working it further. Without log in a company cannot use the site. The company can update its own information, add a new job, and see all the applicants that applied for any jobs. The company can easily decide who will be called for the interview.

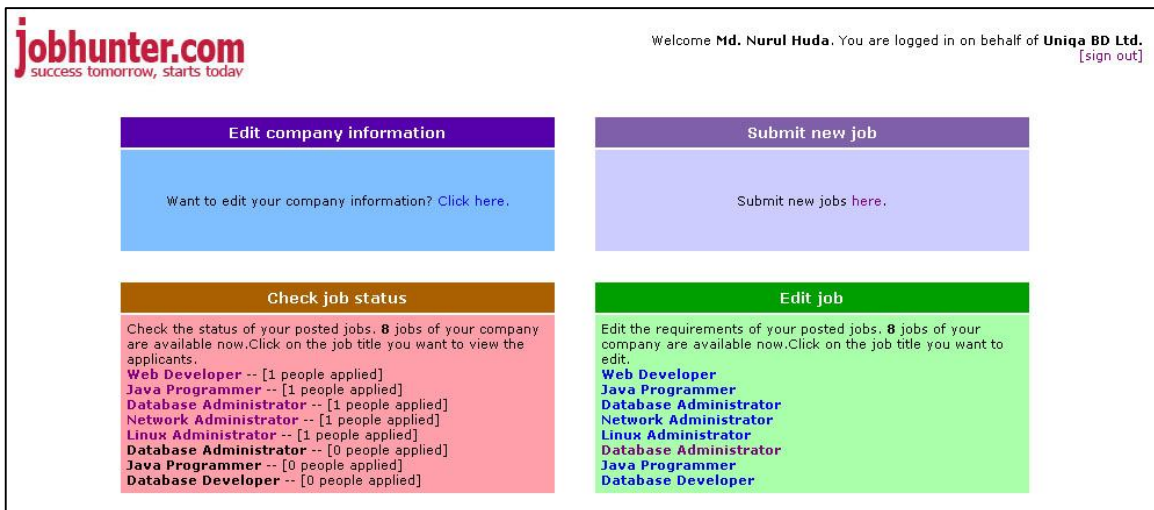


Figure: Homepage of the company

5.4.5 Edit Company profile

In this section of the website under the company information, the admin of the respective company will view the information of the company and if admin will change any information of the company if it is needed. These are the purposes of this page.

The screenshot shows the 'Edit company information' form on the Jobhunter.com website. The form is titled 'Edit company information' and is divided into two sections: 'Edit company information' and 'Account Information'. The 'Edit company information' section includes the following fields:

Edit company information	
Company Name	Uniqa BD Ltd.
Address	24/12, Mohakhali CA
City	Dhaka
Country	Bangladesh
Phone	7891234
Email	career@uniqa.com
Contact Person	Md. Nurul Huda
Designation	Head of Recruitment
Company Website	www.uniqa.com
Company Business	software development

The 'Account Information' section includes the following fields:

Account Information	
User Name	uniqa
Password	•••••
Confirm Password	•••••

An 'Update' button is located at the bottom of the form.

Figure: Edit company information

5.4.6 New Job

In this page company put the details for the new job available in the company. Details contain designation, qualifications, and responsibilities, no of posts available, deadline to apply, etc.

jobhunter.com
success tomorrow, starts today

Welcome **Md. Nurul Huda**. You are logged in on behalf of **Uniqs BD Ltd.** [sign out]

Company Home Edit Company Info

Submit new job

Job Designation

Qualification

Responsibility

Post available

Salary

Application Deadline 1 January 2006

Submit Reset

Figure: Submit new job page

5.4.7 Check job status

In this title section, the employee can watch the applicants against each and every job posted under that company.

jobhunter.com
success tomorrow, starts today

Welcome **Md. Nurul Huda**. You are logged in on behalf of **Uniqs BD Ltd.** [sign out]

Company Home Edit Company Info New Job

Job Designation: Linux Administrator

Applicant	Qualification	Years of Experience	Call for meeting	Send Message
Moshfiqur Rahman	Degree: BSc. in CSE Institution: BRAC University Result: 3.39 Passing Year: 2007	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Call for interview Send Message

Figure: Check the applicants that applied for any job

5.4.8 Call for interview

After viewing all the details of the applicant, the employee can call that applicant for interview/2nd interview/joining. In interview/2nd interview/joining section; employee will select the date and further information.

The screenshot shows a web form titled "Call for a meeting". At the top left is the Jobhunter.com logo. At the top right, it says "Welcome Md. Nurul Huda. You are logged in on behalf of Uniqa BD Ltd. [sign out]". Below this is a navigation bar with "Home", "New Job", and "Edit Company Info". The form itself has three main sections: "Date" with dropdowns for day (1), month (January), and year (2006); "Time" with dropdowns for hour (1), minute (00), and period (am); and "Place (if other than the office address)" with a text input field. A "Submit" button is located at the bottom center of the form.

Figure: Call for interview option

5.4.9 Seekers Messages

When a seeker gets logged in the website, after the log in process, seeker will enter in this page and the first thing seeker will notice will be 2 messages. The first message is the list seeker has already applied. And the 2nd message will alert the seeker whether there is any interview/2nd interview/joining message.

The screenshot shows a web page for a job seeker. At the top left is the Jobhunter.com logo. At the top right, it says "Welcome Moshfiqur Rahman [sign out]". Below this is a search bar with the text "Search job by keyword" and a "Search" button. Below the search bar is a navigation bar with "Home", "My Home", "Edit Resume", and "Career Counseling". The main content is a table with three columns: "Reference", "Message Heading", and "Date Received".

Reference	Message Heading	Date Received
Job Designation: Linux Administrator Company: Uniqa BD Ltd.	Call for interview	Monday, February 13, 2006
Job Designation: Web Developer Company: Uniqa BD Ltd.	Call for interview	Sunday, February 12, 2006
Job Designation: Web Developer Company: Uniqa BD Ltd.	Call for interview	Monday, July 31, 2006
Job Designation: Web Developer Company: Uniqa BD Ltd.	Call for interview	Sunday, July 30, 2006
Job Designation: Network Administrator Company: Uniqa BD Ltd.	You are selected	Sunday, February 12, 2006
Job Designation: Web Developer Company: Uniqa BD Ltd.	Call for join	Sunday, February 12, 2006
Job Designation: Web Developer Company: Uniqa BD Ltd.	Call for 2nd meeting	Sunday, July 30, 2006
Job Designation: Linux Administrator Company: Uniqa BD Ltd.	call for 2nd interview	Monday, February 13, 2006

Figure: Job seekers message inbox

5.4.10 Apply Online

This page where seekers can post their online resume. Seekers need to submit resume to be valid member of the site. Considering some job sites we have added the same technique without posting resume seekers can't be a regular member. Here seeker will post resume according to the form designed in the software. For that we gathered all relevant information for the resume and included in the page.

So that seeker can easily post their resume here and click on the "Apply Online" button. The resume will be updated in the database.

There are some other options in the same page from where anybody can edit previous and updated and saved it as a new one.

The screenshot shows the Jobhunter.com website interface. At the top left is the logo 'jobhunter.com' with the tagline 'success tomorrow, starts today'. At the top right, it says 'Welcome Moshfiqur Rahman [sign out]'. Below the header is a navigation menu with links: Home, My Home, Edit Resume, and Career Counseling. The main content area features a job listing titled 'Jobs Details'. The listing includes the following information:

- Job Designation:** Java Programmer
- Qualification:** BSc. in CSE
- Responsibilities:** Java
- Salary:** na
- Company Info:** Uniqs BD Ltd., 24/12, Mohakhali CA, Dhaka, Bangladesh, Phone : 7891234, Email : career@uniqs.com, Web : www.uniqs.com
- Application Deadline:** Friday, August 25, 2006

At the bottom of the job listing is a button labeled 'Apply Online'.

Figure: Page where seekers can apply online

5.5 Sending and Receiving SMS

Adding SMS capabilities to an application is not a simple matter. It requires specialized knowledge that might be outside an individual programmer's

expertise. To integrate the SMS capabilities, we rely upon the power, flexibility and reliability of the SMS and Pager Toolkit by ActiveXperts Software.

SMS and Pager Toolkit is an ActiveX/COM component, and provide SMS and Pager messaging functionality to an application.

With this Toolkit, we can **send** and **receive** SMS messages via a:

- **GSM modem;**
- **GSM phone;**
- **SMPP compliant SMSC provider;**
- **Hayes compatible modem.**

5.5.1 Hardware Requirements

- GSM modems

This is a fast and reliable device to send and receive SMS messages.

We can send plain text SMS messages, Unicode messages, ring tones and other advanced SMS messages using a GSM modem.

- GSM phones with AT+C modem command support

GSM phones work similar to GSM modems. We connect our GSM phone to the server via the USB port. Connection with serial port or Bluetooth is also possible.

People usually prefer to use a dedicated GSM modem rather than a GSM phone, because it is cheaper and faster.

To send SMS messages using a GSM phone and SMS and Pager Toolkit, we use the **GsmOut object**; to receive, we use the **GsmIn object**.

To send and receive SMS, we used the Nokia 6650 phone set and to connect it with the server we use DKU-2 type USB data cable.

5.5.2 SMS Server:

We have developed a SMS Server in Visual Basic 6.0. It has two parts: one is for retrieving SMS from the GSM device (in our case, phone set) and the other is for sending SMS from the GSM device. The SMS server will run all-time and check the MS Access database every 30 seconds if there is any new SMS to send. After every 45 seconds, it checks the SMS device if there any SMS to read from the GSM device.



Figure: SMS Server

Chapter 6

Testing

6.1 Unity and integration testing

We have tested our software in cell phones by sending SMS frequently. All the cell phones with GSM support will be able to successfully run our software.

6.2 System testing

First we post a new job in the website. As soon as the job is saved in the database, a new job alert SMS is sent to the desired applicant. As the SMS server we use a number with +8801711187962.



Figure: New job alert

Now suppose applicant want to see the details. Then he/she has to type details and job id by a space to our server number (+8801711187962). After a mobile server gets the SMS, it will reply with details to the applicant.

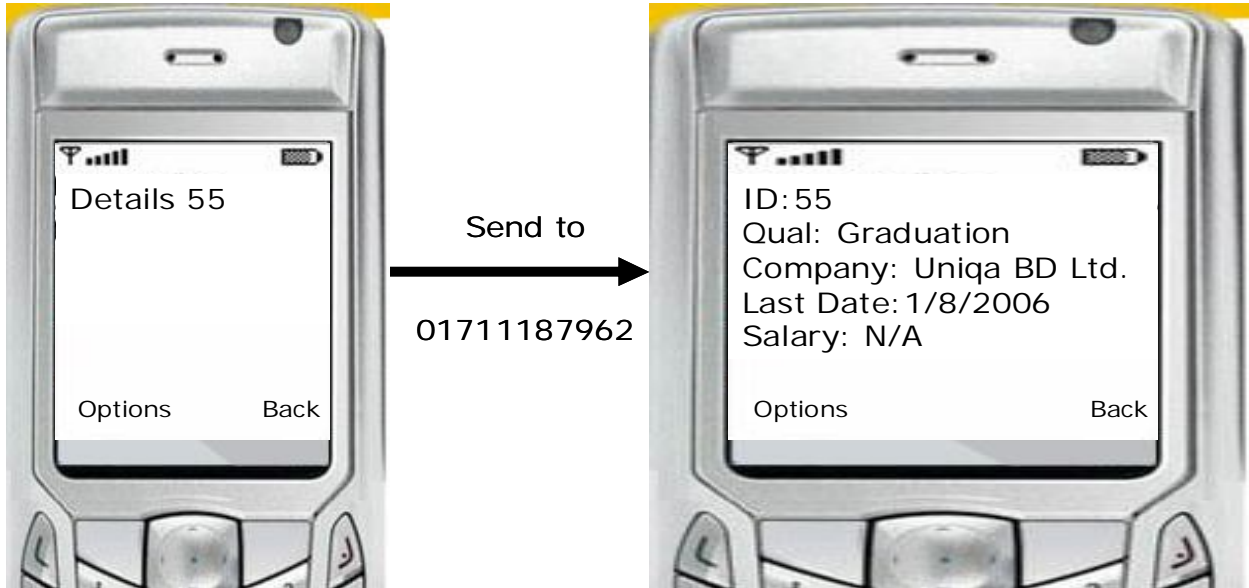


Figure: Get job details information

Watching the details of the job, if anyone wants to apply, then that person types apply then job id by a space to our server number (+8801711187962).

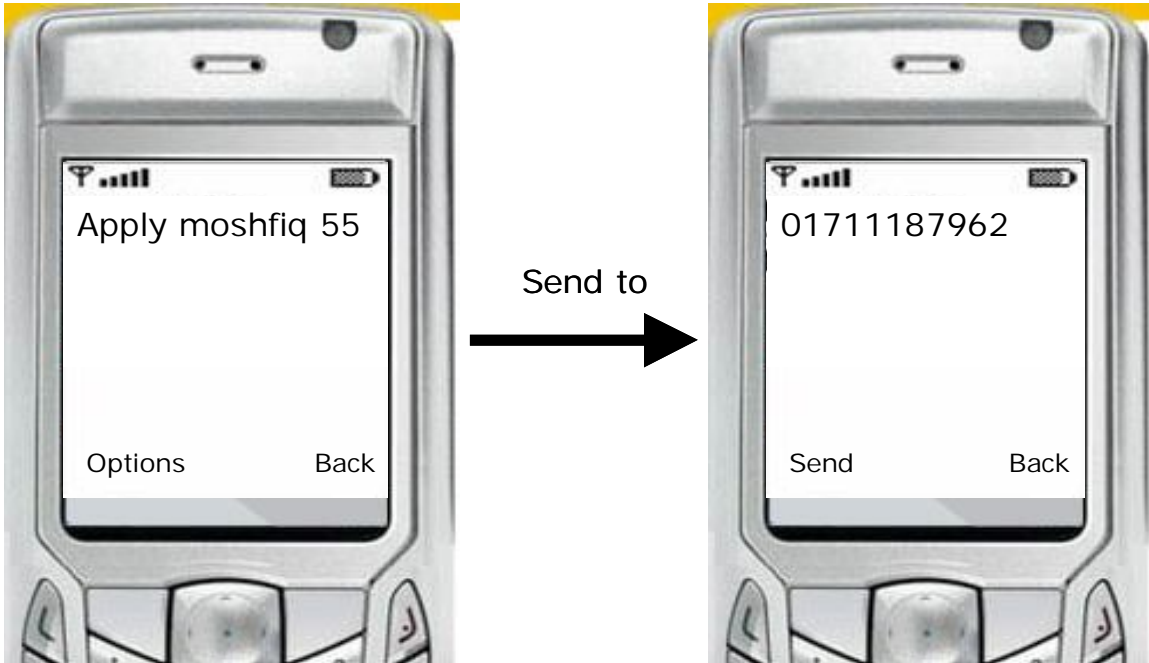


Figure: Apply for a job directly by sending an SMS

After all the tasks that are mentioned above are done, the company employee will check all the CV's. Then he/she chooses some applicant and sends SMS to those applicants for interview.



Figure: Interview alert in seekers mobile phone

After interview, the applicant can be called for 2nd interview or joining.

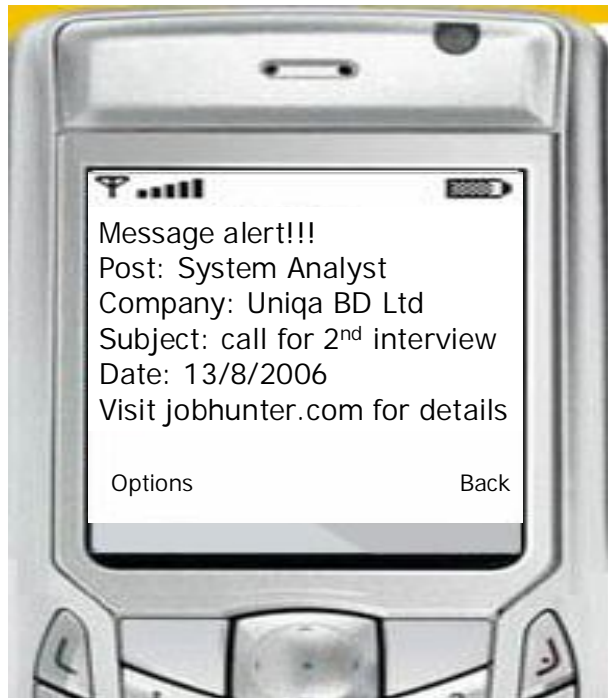


Figure: Message alert

After all the SMS are sent to the desired applicant, the SMS server will keep a record of all the SMS that are sent.

tbl_send_sms : Table				
	send_id	mobile_no	sms_text	isSent
	0	01712056388	New job alert from Bangladesh.JobID:47. Post:Application developer. Visit jobhunter.com for details.	1
	1	01711187962	New job alert from Bangladesh.JobID:47. Post:Application developer. Visit jobhunter.com for details.	1
	2	01712056388	New job alert from Bangladesh.JobID:48. Post:Application Developer. Visit jobhunter.com for details.	1
	3	01711187962	New job alert from Bangladesh.JobID:48. Post:Application Developer. Visit jobhunter.com for details.	1
	4	01712056388	New job alert from Bangladesh.JobID:49. Post:Application developer. Visit jobhunter.com for details.	1
	5	01711187962	New job alert from Bangladesh.JobID:49. Post:Application developer. Visit jobhunter.com for details.	1
	6	01712056388	New job alert from Bangladesh.JobID:50. Post:Application Developer. Visit jobhunter.com for details.	1
	7	01711187962	New job alert from Bangladesh.JobID:50. Post:Application Developer. Visit jobhunter.com for details.	1
*	Number)			0

Figure: SMS sent from database

6.3 Results

We have tested the unity and integrity of our software. It sends the SMS properly and properly receives in the server end. We have tested it using several types of input and we have successfully been able to read out all the data. But we have considered only one database for testing. For a complete testing we have to test in a large scale. It took lots of time for studying and testing.

Chapter 7

*Future Scope &
Conclusion*

7.1 Future Developments

Due to lack of time we cannot some stunning features that we thought but cannot add to our project. So we consider these things as future developments.

- Currently we are unable to send any notification to a new member about the existing jobs that meet his criteria. Jobs information are only sent to hm when new jobs are added to our database. In near future, we plan to add this feature that when a seeker sign up in our site, job alert will be sent to him that already exists in our database and match his criteria and education.
- For checking purpose and to keep things simple, we permit a member to apply from cell phone only by submitting his username. This system may create holes in security issue. Because any body can send SMS with any random name and unfortunately resume will be submitted if the name exists. So, we think to give every member a unique identification number that must be submitted when he going to apply for any job.
- In future it will be developed and will be able to test in a large scale for the large environment.
- Our proposed System does not allow searching job using mobile phones. This issue is also included in our future development to allow the members searching jobs through SMS. Searching job through mobile makes the system more efficient and more automated.

7.2 Conclusion

Being a part of the growing job market, it is expected that our proposed system will give great advantage to the job seekers. They will always be up-to-date with the new job alert in their cell-phone. Getting interview alert will not let them miss any dream opportunities. Getting job details will help them to check whether they are suitable for the job and applying by SMS will enable them to apply for any job from anywhere anytime.

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