CHAPTER 5

SYSTEM IMPLEMENTATION

5.1 System Specification

5.1.1 Hardware

This thesis process is done with several computers and server. In order to complete the entire process, including thesis writing, application design and analysis, program writing, and testing, the author done the process in author's home desktop computer, ABC Organization's computer, and ABC Organization's server.

Desktop Computer:

- Processor: Intel (R) Core (TM)2 Duo CPU 2.00 GHz
- RAM: 2 GB
- OS: Windows Vista Home Basic SP 1

ABC Organization's computer:

- Processor: (R) Core (TM)2 Duo CPU 2.00 GHz
- RAM: 2GB
- OS: Windows XP SP 2

5.1.2 Software

The implementation and testing phases are done using several supporting software, both from author's home desktop computer and ABC Organization's

computer. This is the list of software package used to complete the entire application:

- Windows XP, Home Edition, 32 bit
- Microsoft Visual Studio 2008
- Microsoft SQL Server 2005
- Internet Information Service (IIS)

5.2 **Operational Procedures**

In order to make sure that the application will run correctly, testing was done to this application. For testing step, the application was tested by HRO, HR Officer, and Related Section. Each of these section tested the application based on their pages. HRO tested on HRO pages, HR Officer tested on HR Officer pages, and Related Section tested on Related Section pages.

5.3 Implementation Strategy

This HR application is implemented mainly using ASP.NET, which is done using Microsoft Visual Studio 2008. In order to store and retrieve the data needed, all data stored in the database. Microsoft SQL server is being used as the database and connected with the application. This application also being tested using another kind of browsers, such as Internet Explorer 7, Internet Explorer 8, and Mozilla Firefox. Each browser has its own programming capability, which resulted to the screen layout that will be slightly different.

5.4 Sample Screenshot

These are the sample screenshot of the HR application that has been done based on the user interface design in Chapter 4:

I. Main Page:

🥖 Untitled Page - Windows Internet Explo	orer				
📀 💿 🔻 😢 http://localhost:50503/l	Recruitment/UserPages/MainPa	ge.aspx		✓ ✓ Google search	۶ ج
File Edit View Favorites Tools	Help				
Mindows Live Bing	🔎 👻 What's Ne	w Profile Mail Photos Cal	lendar Share ag		🔀 Sign in
😭 🏟 🍘 Untitled Page				👌 • 🗟 • 🖶 • 🛙	🍃 Page 💌 🎯 Tools 👻
AVG . OI- explore with YAHOO	D! SEARCH 👻 💽 Search	🤯 Total Protection 📔 🏹 AVG Infi	o - Get More 🛛 🌛 -		
		BR _	ABC Organization		
			Career Opportunities \star		
E	mployment Inities	How to Apply	Open Vacancy	FAQ	
				Login	
CHOOSE YO	OUR CAREER	ABC Organization			
Bran	nch1	(d	List of Available Job lick for detail information)		
Bran	nch2	PositionTitle PositionGrade	<u>OpenTo</u> <u>OpeningDate</u> <u>ClosedDate</u> Detail Info		
Bran	nch3	Secretary FSN-05	All 04/12/2009 04/12/2009 Detail interested 16:11:00 16:11:00 Detail		
Bran	nch4				
Bran	nch5		123		
		Other Er	mployment Opportunity		
	Country1	Country2	Country3	Country4	
			0		
Done				Internet Protected Mode: Off	€ 100% -

Figure 37 Main Page Sample Screenshot

II. Applicants Pages:

• Home Page:



Figure 38 Home Page Sample Screenshot

• View List of Available Job:

C Untitled Page - Win	dows Internet Explorer				
📀 💿 🔻 🙋 http	://localhost:50503/Recruitment/UserPages/ListAvailJob.aspx			👻 🍫 🗙 Google search	P -
File Edit View F	avorites Tools Help				
🝠 Windows Live 🛛 B	ing 🛛 🔽 🗸 What's New Profil	e Mail Photos Calendar Share	าริส		🔽 Sign in
🙀 🏟 🌈 Untitle	ed Page			🟠 • 🗟 • 🖶 • 🛙	Page 🕶 🍈 Tools 👻
🚔 AVG 👻 😏!-	plore with YAHOO! SEARCH - Search 6 Total	Protection 🛛 🏹 AVG Info 🝷 Get More]•		
	12	ABC Orga	nization portunities *		
	Employment Opportunities	How to Apply	Open Vacancy	FAQ	
	Home			Welcome, t@t.com	
	Update Account Info	Step 3: Choose Available Job and ABC Organization	l Apply		
	Attach Document		ist of Available Job		
	List of Available Job(s)	(clic)	c for detail information)		
	List of Applied Job(s)	kdVacancy PositionTitle Positi	onGrade AnnouncementNumbe	r <u>OpenTo</u> Detail Info	
	Logout	6 Secretary FSN-0	5 105	interested <u>Detail</u> candidate	
				123	
		0	~		
				Internet Protected Mode: Off	€ 100% ▼

Figure 39 View List of Available Job Sample Screenshot

III. HRO Pages:

C Untitled Page - W	indows Internet Explorer					
📀 💿 🔻 🖻 ht	tp://localhost:50503/Recruitment/HRPages/CreateVacancyAnno	ouncement.aspx			🗸 🍫 🗙 🛛 Google search	P •
<u>File Edit V</u> iew	Favorites Iools Help					
灯 Windows Live	Bing 🛛 🗩 What's New Profil	e Mail Photos Calendar	Share as			🔽 Sign in
😭 🎄 🌈 Unti	tled Page				🟠 • 🗟 • 🖶 • 🛙	<mark>≩ P</mark> age ▼ ۞ T <u>o</u> ols ▼ [≫]
🞥 AVG 👻 🛛 !-	explore with YAHOO! SEARCH 👻 💽 Search 🕴 👌 Total	Protection 📔 🌏 AVG Info 🝷 Get	More 🦷 🥑 🔹			
	7	ABC + Caree	C Organization er Opportunitie	ts ★		Î
	Employment Opportunities	How to Apply	Oper	Vacancy	FAQ	E
	Create Vacancy Announcement	Position Title :	CREATE VAC	ANCY ANNOUNCE	MENT	
	Publish the Cleared Job Vacancy	Position Grade :				
	View Qualified Applicants	Announcement Number :				
	View the Shorted List with Contact	Open To :				
	Logout	Work Hours :	-			
			≤ Januari 2010	≥ 5 M		
		Open Date :	28 29 30 31 1 4 5 6 7 8 11 12 13 14 15 18 19 20 21 22 25 26 27 28 29	2 3 9 10 16 17 23 24		
Done					Sinternet Protected Mode: Off	• • •

• Create Vacancy Announcement:

Figure 40 Create Vacancy Announcement Sample Screenshot

• Publish the Cleared Job Vacancy:

💈 Untitled Page - Windows Internet Explorer						
🕒 💿 🔻 😰 http://localhost:50503/Recruitment/HRPages/PublishTheClearedJobVacancy	.aspx			• * , ×	Google search	P -
File Edit View Favorites Tools Help						
19 Windows Live Bing 🛛 🗸 What's New Profile Mail	Photos Calendar Share	at				Z Sign in
😭 🎄 🌈 Untitled Page				4 -	S - 🖶 - 🕞	Page 🔹 🎯 Tools 👻
AVG - @!- explore with YAHOO! SEARCH - Search 3 Total Protection	📓 AVG Info 🝷 Get More	2 -				
R	ABC Org	anization	_			
B	★ Career Op	portunities 🔸				
Employment Opportunities	How to Apply	Open	Vacancy	FAQ		
Create Vacancy Announcement		PUBLISH THE C	LEARED JOB VACAN	сү		
Publish the Cleared Job Vacancy	Note : This all the list of Title to Approve or Rejec	Vacancy Announc t The Vacancy An	ement created by nouncement	HR. Please Click (on the Job	
	PositionTitle PositionGra	<u>ade OpenTo</u>	<u>OpeningDate</u>	<u>ClosedDate</u>	Detail Info	
view Qualined Applicants	Secretary FSN-05	All interested	04/12/2009	04/12/2009	Detail	
View the Shorted List with Contact		candidate	16.11.00	10.11.00	1234	
Locout						
	· · · · · · · · · · · · · · · · · · ·					
			6	Internet Protected	Mode: Off	€ 100% ▼

Figure 41 Publish the Cleared Job Vacancy Sample Screenshot

IV. HR Officer Page:



• Clear the Approved Vacancy Announcement

Figure 42 Clear the Approved Vacancy Announcement Sample Screenshot

- V. Related Section Pages:
 - View Qualified Applicant:

🦉 Untitled Page - Windows Internet Explorer	_ 0 ×
😧 🛞 🔻 😰 http://ocalhost:50503/Recruitment/HiringOfficePages/ViewQualifiedApplicants(All).aspx 🔹 🕁 🔀 Google search	ب ۾
File Edit View Favorites Tools Help	
🌮 Windows Live Bing 😰 🗸 What's New Profile Mail Photos Calendar Share 🔥	🗾 Sign in
😭 🛠 🖉 Unitited Page	Page • 🔘 Tools • "
AVG VG V QF evolve with Va HOOI SEARCH V D Search + 1 Total Protection A WG Info - Get More 2 -	
ABC Organization	
* Career Opportunities *	
Employment Opportunities How to Apply Open Vacancy FAQ	
VIEW THE QUALIFIED APPLICANTS	
Submit Hiring Kequest Position: Business Analyst 👻	
View Qualified Applicants Status: Qualified v	
Select Qualified Candidate	-
Applicant ID Position Title Education Experience Language Status	
View the Shorted List with Contact 1 Business Analyst Y Y Y Qualified	
4 Business Analyst Y Y Y Qualified	
15 Business Analyst Y Y Y Qualified	
Logout 16 Business Analyst Y Y Y Qualified	
17 Business Analyst Y Y Y Qualified	
23 Business Analyst Y Y Y Qualified	
25 Business Analyst Y Y Y Qualified	
26 Business Analyst Y Y Y Qualified	
27 Business Analyst Y Y Y Qualified	
28 Business Analyst Y Y Y Qualified	
12	

Figure 43 View Qualified Applicant Sample Screenshot

• Select Qualified Candidate:

Untitled Page - Wind	lows Internet Explorer	andidates asn					<u>.</u>	Ganale seam	
File Edit View Fa	norites Tools Help	nuluates.asp						ougle searc	
Windows Live Bi	ng 🛛 🖓 🗸 What's New Profile M	ail Photos	Calendar Sha	re als					Sign in
	d Dane								• Page • @ Tools •
		ion 🗟 A	VG Info + Get More	- <i>3</i>] -					Ca 5 64 1-4
									A
	Employment Opportunities		How to Apply		Open V	acancy		FAQ	
	Submit Hiring Request	Position	Business	Analyst 👻	HE QUALIF	IED APPLICA	115		
	View Qualified Applicants	Status	Qualified	•	View				
	Select Qualified Candidate	Is Tr	op 10 Best Applica	ants ants					
	View the Shorted List with Contact		Applicant ID	Position Title	Education	n Experience	Language	Status	
	1		1	Business Analyst	Y	Y	Y	Qualified	
	LOUIDI		4	Business Analyst	Y	Y	Y	Qualified 📃	
			15	Business Analyst	Y	Y	Y	Qualified	
			16	Business Analyst	Y	Y	Y	Qualified 📃	
			17	Business Analyst	Y	Y	Y	Qualified	
			23	Business Analyst	Y	Y	Y	Qualified 📃	
			25	Business Analyst	Y	Y	Y	Qualified	
			26	Business Analyst	Y	Y	Y	Qualified 📃	
			27	Business Analyst	Y	Y	Y	Qualified	
			28	Business Analyst	Y	Y	Y	Qualified 📃	
								12	
					Sub	mit			
Done							Internet	Protected Mode: Off	€ 100% ▼

Figure 44 Select Qualified Candidate Sample Screenshot

• View the Shorted List with Contact



Figure 45 View the Shorted List with Contact Sample Screenshot

5.5 Test Plan

5.5.1 Module Testing

After the each coding phase finished, unit testing is being done. This test is done to ensure each unit work properly and correctly. If a bug found in unit testing, the will be corrected and the coding is being revised again. The revised version will be tested again to ensure that it has worked correctly. These are the result of the tests:

I. Applicants Pages:

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Register	1. User's	1. Pass the data	1. Processing	Ok
	username and	to User	data, whether	
	password	database	success, fail,	
	2. User is not yet		or invalid	
	a member		data)	

Table 42 Register Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Apply the job	1. User's OF-612	1. Pass the data	1. Detail Job	Ok
	Documents	to User	Vacancy	
	2. User's Resume	database		
	3. User's Cover			
	Letter			
	4. User has logged			
	in			

 Table 43 Apply the Job Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View	1. User's chosen	1. Search	1. List of	Ok
Available Job	branch	database data	available job	
		based on the	vacancy	
		branch		

Table 44 View Available Job Unit Testing

II. HRO Pages:

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Create	1. Hiring request	1. Pass the data	1. Detail job	Ok
Vacancy	from Related	to Job	vacancy	
Announcement	Section	Vacancy	announcement	
	2. HRO has	database		
	logged in			

Table 45 Create Vacancy Announcement Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Publish the	1. Detail job	1. Pass the data	1. Published job	Ok
Cleared Job	vacancy	to Job	vacancy	
Vacancy	announcement	Vacancy	annoucement	
	2. HRO has	database		
	logged in			

Table 46 Publish the Cleared Job Vacancy Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View All	1. HRO has	1. Search	1. List of all	Ok
Applicants	logged in	database data	applicants	
		for all		
		applicants		

Table 47 HRO View All Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View the	1. HRO has	1. Search	1. List of	Ok
Qualified	logged in	database data	qualified	
Applicants		for qualified	applicants	
		applicants		

Table 48 HRO View the Qualified Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View the Non	1. HRO has	1. Search	1. List of non –	Ok
- Qualified	logged in	database data	qualified	
Applicants		for non –	applicants	
		qualified		
		applicants		

Table 49 HRO View the Non-Qualified Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View the	1. Shorted list	1. Search	1. Shorted list	Ok
Shorted List	chosen by	database data	with contact	
with Contact	Related Section	for shorted list		
	2. HRO has	with contact		
	logged in			

Table 50 HRO View the Shorted List with Contact Unit Testing

III. HR Officer Page:

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Clear the	1. List of	1. Pass the data	1. Cleared	Ok
Approved	approved	to cleared job	documents	
Document	documents	vacancy		
		database		

Table 51 Clear the Approved Document Unit Testing

IV. Related Section Pages:

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Submit Hiring	1. Job vacancy	1. Pass the data	1. Hiring request	Ok
Request	2. Related Section	to hiring		
	has logged in	request		
		database		

Table 52 Submit Hiring Request Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View All	1. Related Section	1. Search	1. List of all	Ok
Applicants	has logged in	database data	applicants	
		for all		
		applicants		

Table 53 Related Section View All Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View the	1. Related Section	1. Search	1. List of	Ok
Qualified	has logged in	database data	qualified	
Applicants		for qualified	applicants	
		applicants		

Table 54 Related Section View the Qualified Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View the Non	1. Related Section	1. Search	1. List of non –	Ok
- Qualified	has logged in	database data	qualified	
Applicants		for non –	applicants	
		qualified		
		applicants		

Table 55 Related Section View the Non-Qualified Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View Top 10	1. Applicant's	1. Search	1. List of top 10	Ok
Best	OF-612	database data	best applicants	
Applicants	2. Applicant's	for applicants		
	resume	2. Sorting data		
	3. Related Section	to top 10 best		
	has logged in	applicants,		
		based on		
		education,		
		experience,		
		and language		

 Table 56 View Top 10 Best Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View Top 15	1. Applicant's	1. Search	1. List of top 15	Ok
Best	OF-612	database data	best applicants	
Applicants	2. Applicant's	for applicants		
	resume	2. Sorting data		
	3. Related Section	to top 15 best		
	has logged in	applicants,		
		based on		
		education,		
		experience,		
		and language		

Table 57 View Top 15 Best Applicants Unit Testing

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
Select the	1. List of top 10	1. Search	1. List of	Ok
Qualified	and top 15 best	database data	qualified	
Applicants for	applicants	for top 10 and	applicants for	
Test	2. Related Section	top 15 best	test	
	has logged in	applicants		
		2. Pass the data		
		to shorted list		
		with contact		
		database		

Unit Function	Unit Input and	Unit Process	Unit Output	Status
	Assumption			
View the	1. Shorted list	1. Search	1. Shorted list	Ok
Shorted List	chosen by	database data	with contact	
with Contact	Related Section	for shorted list		
	2. Related Section	with contact		
	has logged in			

Table 59 Related Section View the Shorted List with Contact Unit Testing

5.5.2 Integration Testing

Integration testing has not been done with the system inside ABC organization. The reason of this is because this HR application is not yet done until the end result of the application, which is to get the selected applicant that passed all of the tests. The current application only emphasize on the core of the application, which is to get the result of qualified applicants in the form of shorted list with their contact.

In the future, this application will be developed more until the end result of all the process in recruitment and selection. After that, the integration test will be done for the complete application in ABC organization.