

SYSC 5709 – Fall 2019 – Course Project

Submitted by : Abhinandan Sharma & Raghvendra Singh Rana

SYSC5709F [35794]

Advance Topics in Software Engineering

**HCM-ERP – Developer Manual**



**Carleton**  
UNIVERSITY

**Canada's Capital University**

**Authors:**

**Raghvendra Singh Rana: [raghvendrarana@gmail.com](mailto:raghvendrarana@gmail.com)**

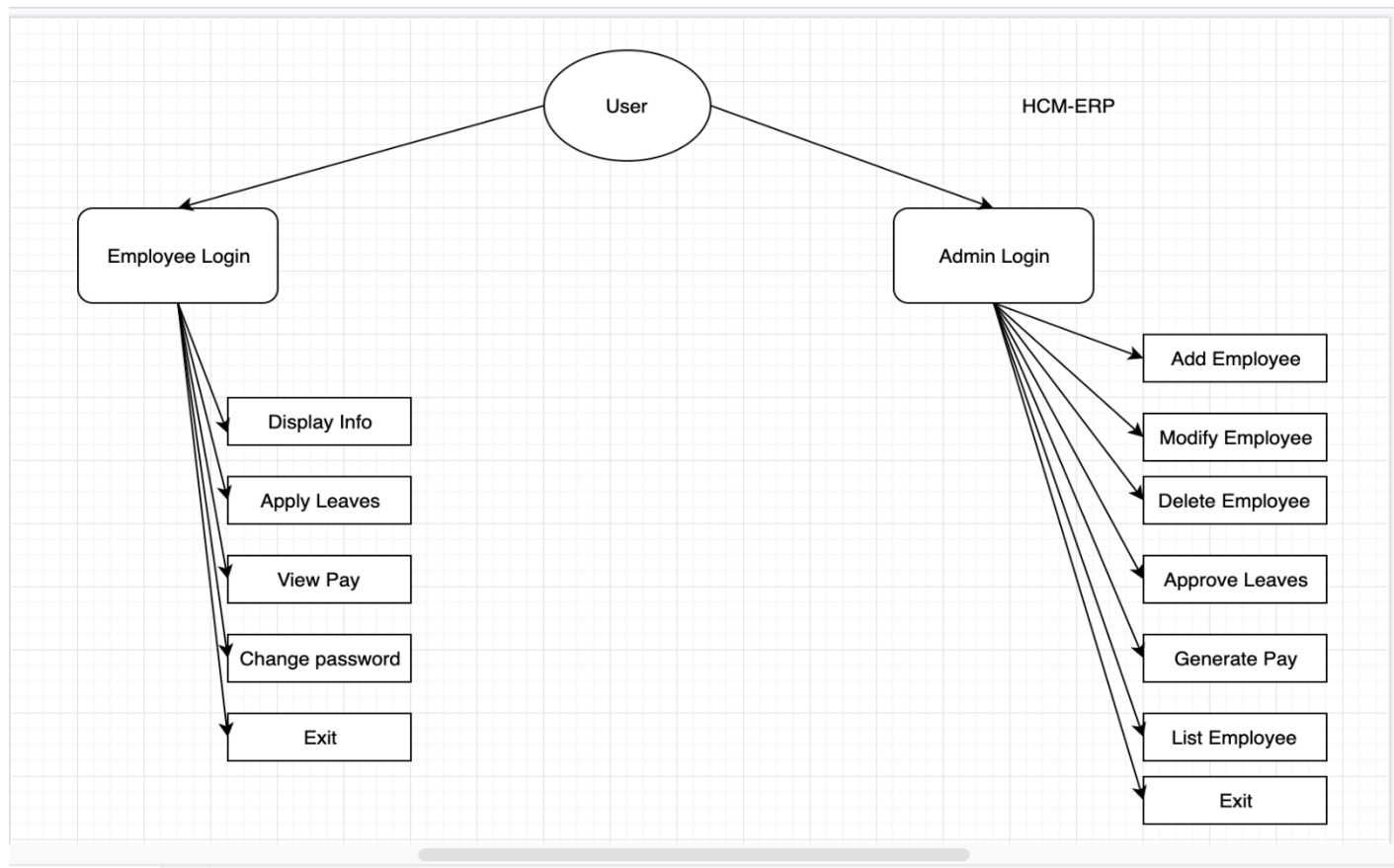
**Abhinandan Sharma: [abhinandansharma3@mail.carleton.ca](mailto:abhinandansharma3@mail.carleton.ca)**

## Problem Statement

**Human Capital Management System ERP:** Employees are valuable asset in organisation. Therefore, managing the employees is most crucial task. This system will keep of records of employee, salaries and designation. The software consists of menu which will display all available options like employee management which will include adding, modifying, deleting and displaying the employee data.

Additionally, the system will keep a track of employees' leaves and wouldn't allow employee to apply for leave more than entitled. Lastly, the system will calculate the employee's salary based on no of hours he/she worked. Also, system will display the pay stub if he/she wants.

## Software Design:



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**File and Folder Structure Organization**

**1. bin :** This folder have executable and data file for the HCM ERP system one input file :

- Employee.DAT
- Main.exe
- SAL.DAT

**2. build :** This folder has all the object files generated using make file..

- add.o
- apply\_leave.o
- approve\_leave.o
- console.o
- delete.o
- info.o
- list.o
- login.o
- main.o
- menu\_admin.o
- menu\_employee.o
- modify.o
- month\_convert.o
- new\_pass.o
- pay.o
- pay\_emp.o
- time1.o
- user\_name.o
- validate.o

**3. doc :** This folder have documentation files of the project.

- Architecture.png
- Flow chart of HCM ERP.png
- User Manual for HCM.pdf
- Running HCM-ERP using GitBash.pdf

**4. include :** This folder have the all the header files used in the project.

- add.h
- apply\_leave.h
- approve\_leave.h

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- console.h
- delete.h
- info.h
- list.h
- login.h
- main.h
- menu\_admin.h
- menu\_employee.h
- modify.h
- month\_convert.h
- new\_pass.h
- pay.h
- pay\_emp.h
- time1.h
- user\_name.h.h
- validate.h
- Emp\_structure.h
- sal\_structure.h

**5. src :** This folder contains the source code for the message and top model.

- add.c
- apply\_leave.c
- approve\_leave.c
- console.c
- delete.c
- info.c
- list.c
- login.c
- main.c
- menu\_admin.c
- menu\_employee.c
- modify.c
- month\_convert.c
- new\_pass.c
- pay.c
- pay\_emp.c
- time1.c
- user\_name.c.c

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- validate.c

**6. test** : This folder contains the unit test for the project.

- test files

## **Downloading HCM-ERP**

### **HCM-ERP**

#### **1.) Installing Git Bash**

##### **For Linux:**

If you want to install the basic Git tools on Linux via a binary installer, you can generally do so through the package management tool that comes with your distribution. If you're on Fedora (or any closely related RPM-based distribution, such as RHEL or CentOS), you can use dnf:

```
$ sudo dnf install git-all
```

If you're on a Debian-based distribution, such as Ubuntu, try apt:

```
$ sudo apt install git-all
```

For more options, there are instructions for installing on several different Unix distributions on the website, at <https://git-scm.com/download/linux>.

##### **For macOS**

There are several ways to install Git on a Mac. The easiest is probably to install the Xcode Command Line Tools. On Mavericks (10.9) or above you can do this simply by trying to run git from the Terminal the very first time.

```
$ git --version
```

##### **Installing on Windows**

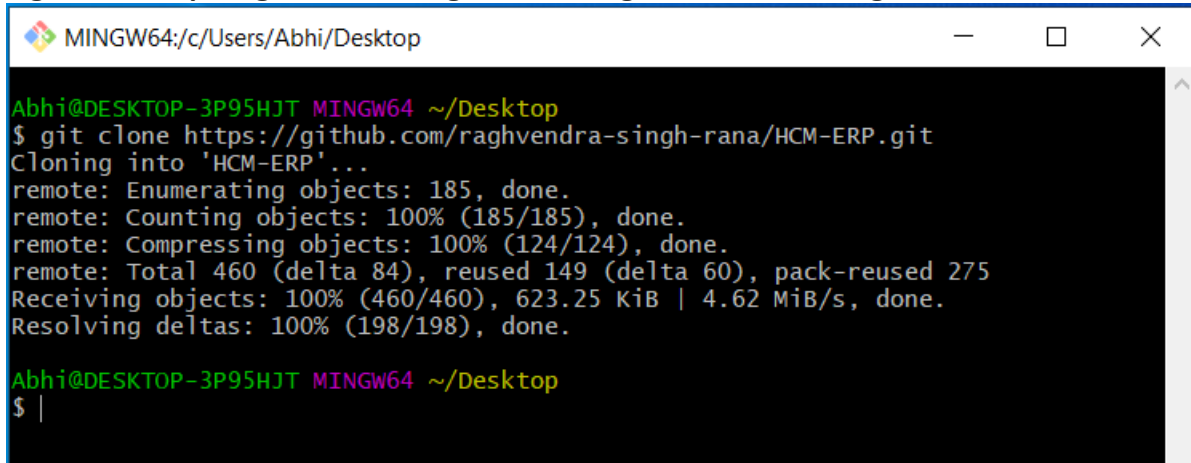
There are also a few ways to install Git on Windows. The most official build is available for download on the Git website. Just go to <https://git-scm.com/download/win> and the download will start automatically. Note that this is a project called Git for Windows, which is separate from Git itself; for more information on it, go to <https://gitforwindows.org>.

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2.) After downloading git bash on the operating system clone the GitHub repository using the following command.

**\$ git clone https://github.com/raghvendra-singh-rana/HCM-ERP.git**



```
MINGW64:/c:/Users/Abhi/Desktop

Abhi@DESKTOP-3P95HJT MINGW64 ~/Desktop
$ git clone https://github.com/raghvendra-singh-rana/HCM-ERP.git
Cloning into 'HCM-ERP'...
remote: Enumerating objects: 185, done.
remote: Counting objects: 100% (185/185), done.
remote: Compressing objects: 100% (124/124), done.
remote: Total 460 (delta 84), reused 149 (delta 60), pack-reused 275
Receiving objects: 100% (460/460), 623.25 KiB | 4.62 MiB/s, done.
Resolving deltas: 100% (198/198), done.

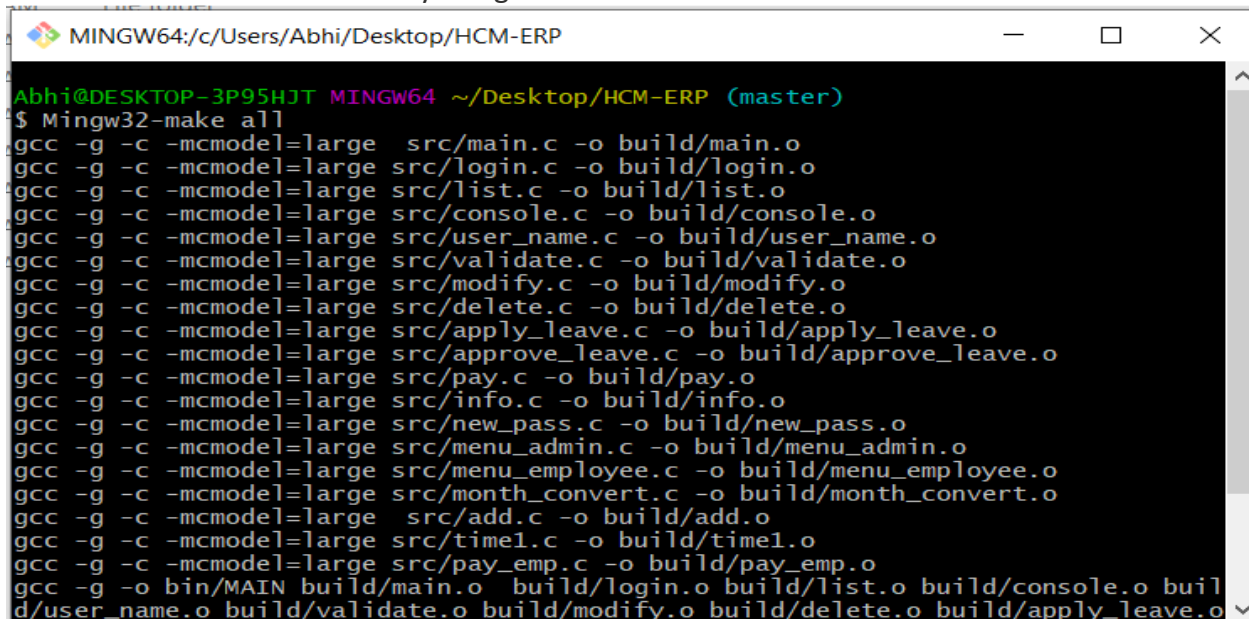
Abhi@DESKTOP-3P95HJT MINGW64 ~/Desktop
$ |
```

3.) After cloning the repository the folder will be visible on desktop with the HCM-ERP name open the folder and the open git bash by right click on the mouse and select get git bash here.

After that run the make file using the following command:

**\$ Mingw32-make all**

If the command doesn't work try using **make all**



```
MINGW64:/c:/Users/Abhi/Desktop/HCM-ERP

Abhi@DESKTOP-3P95HJT MINGW64 ~/Desktop/HCM-ERP (master)
$ Mingw32-make all
gcc -g -c -mcmodel=large src/main.c -o build/main.o
gcc -g -c -mcmodel=large src/login.c -o build/login.o
gcc -g -c -mcmodel=large src/list.c -o build/list.o
gcc -g -c -mcmodel=large src/console.c -o build/console.o
gcc -g -c -mcmodel=large src/user_name.c -o build/user_name.o
gcc -g -c -mcmodel=large src/validate.c -o build/validate.o
gcc -g -c -mcmodel=large src/modify.c -o build/modify.o
gcc -g -c -mcmodel=large src/delete.c -o build/delete.o
gcc -g -c -mcmodel=large src/apply_leave.c -o build/apply_leave.o
gcc -g -c -mcmodel=large src/approve_leave.c -o build/approve_leave.o
gcc -g -c -mcmodel=large src/pay.c -o build/pay.o
gcc -g -c -mcmodel=large src/info.c -o build/info.o
gcc -g -c -mcmodel=large src/new_pass.c -o build/new_pass.o
gcc -g -c -mcmodel=large src/menu_admin.c -o build/menu_admin.o
gcc -g -c -mcmodel=large src/menu_employee.c -o build/menu_employee.o
gcc -g -c -mcmodel=large src/month_convert.c -o build/month_convert.o
gcc -g -c -mcmodel=large src/add.c -o build/add.o
gcc -g -c -mcmodel=large src/time1.c -o build/time1.o
gcc -g -c -mcmodel=large src/pay_emp.c -o build/pay_emp.o
gcc -g -o bin/MAIN build/main.o build/login.o build/list.o build/console.o build/user_name.o build/validate.o build/modify.o build/delete.o build/apply_leave.o
```

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4.) After the make file executes successfully you will see two folders bin and build. To run the application open bin and run Main.exe.

> HCM-ERP

Name	Date modified	Type	Size
bin	2019-12-17 12:19 AM	File folder	
build	2019-12-17 12:19 AM	File folder	
doc	2019-12-17 12:13 AM	File folder	
include	2019-12-17 12:13 AM	File folder	
lib	2019-12-17 12:13 AM	File folder	
src	2019-12-17 12:13 AM	File folder	
test	2019-12-17 12:13 AM	File folder	
.gitignore	2019-12-17 12:13 AM	Text Document	1 KB
.gitmodule	2019-12-17 12:13 AM	GITMODULE File	1 KB
makefile	2019-12-17 12:13 AM	File	3 KB
README.md	2019-12-17 12:13 AM	MD File	3 KB

;) )

> HCM-ERP > bin

Name	Date modified	Type	Size
MAIN	2019-12-17 12:19 AM	Application	185 KB

**GitHub link:** <https://github.com/raghvendra-singh-rana/HCM-ERP>