School of Innovative Technologies and Engineering

BSc (Hons.) Software Engineering

BSE / 15B / FT

MODULE: Secure Software Development

MODULE CODE: SECU 3119C

Instructions:

1. The technologies to be used are PHP & MySQL.

2. Make sure the work submitted is your own. If found guilty of plagiarism a failure grade will be awarded.

3. Put all your work in a CD for submission to your Lecturer

4. **The submission deadline is on the 15th Week**

RULES

- Suspected plagiarism will be investigated and if found to have occurred will be dealt with according to the procedures set down by the University.
- Late submission will be penalised as per UTM regulation policy for coursework.

SCENARIO

In this assignment you will have to implement an **Online Job Portal** Web application. Your Web application should demonstrate your knowledge in implementing best security practices.

You will be marked on two aspects:

1. Web Application functionalities implemented
2. Security best practices incorporated into your application

Note that you will not be marked on your User Interface Design. So do not waste your time in designing good looking UI, concentrate on implementing the required functionalities.

Application User Roles

Your Web application will consist of two distinct user types

- Job Seeker
- Company

Job Seeker Profile

The functionalities to be implemented for the job seeker role are as follows:

1. A job seeker should be able to view all job(s) posted on the job portal without requiring authentication
2. The job seeker should be able to register himself/herself *(first-time user)* - registration details should be very minimal: (i.e. title, lastname, firstname email address, password, confirm password)
3. The job seeker should be able to login using details supplied during registration. (username will be the email address)

4. The job seeker should be able to update his/her profile once logged on the portal (details of job seeker profile described in section below)

5. The job seeker should be able to upload a copy of his/her CV in PDF or WORD format

6. The job seeker should be able to apply for a job only if he/she is authenticated

7. The job seeker should be able to view all job positions for which he/she has applied

8. The job seeker should get a notification status when a company has rejected or accepted his/her application (notification status displayed for each job position applied, i.e. Status: 'Not Viewed' if job application not yet consulted by company, 'Viewed' if company consulted application, 'Rejected' if job application not accepted by company, 'Accepted' if job application has been accepted by company as a potential candidate)

Details of Job Seeker Profile *(* denotes mandatory)*

- Title ***
- Lastname ***
- Firstname ***
- Email Address *(cannot edit)* ***
- Password / Confirm Password ***
- Postal Address
- Contact number (mobile)
- Date of Birth
- Highest Qualification Achieved ***
- CV uploaded status *(if CV uploaded display proper status)* ***
- Skills *(keywords to be used in search by companies)* ***

Company Profile

The functionalities to be implemented for a company are as follows:

1. A contact person from a company should be able to register his/her company on the portal (minimal registration detail: i.e. Company name, Contact Person, email address, password, confirm password)

2. The contact person should be able to login using the credentials supplied during registration

3. The contact person should be able to update his/her company profile upon logged into the portal (details of company profile as per section below)

4. The contact person should be able to create new job posting for his company (details of job posting as per section below)

5. The contact person should be able to view applications related to a specific job posting

6. The contact person should be able to review applications received as per item (8) in job seeker profile with the proper status being updated in the background

7. The contact person should be able to search the job seeker database based on the skills field filled by the job seeker

Details of Company Profile *(* denotes mandatory)*

- Company Name *
- Contact Person Full name
- Contact Email address *(used for login / cannot edit)* *
- Password / Confirm password *
- Postal Address *
- Company Email Address *

Details of Job Posting *(All fields mandatory)*

- Job Title
- Job Reference
- Closing Date
- Job Description

Business Rules & Criteria

- Job seeker should only be able to apply for a job if he/she is authenticated else only job viewing is possible
- Job seeker cannot apply for a job if he/she has not filled in the mandatory fields in his/her profile
- A job posting should be online as long as the closing date has not elapsed, else it should be in offline mode (i.e. viewable only by the company in the back office)
- A Company should only be able to view application(s) pertaining to his job posting only – not for other companies

Recommended security best practices

- Proper validation of all input fields
- Proper authentication, access control & session management

ASSESSMENT CRITERIA (100 marks)

- 55% marks for all completed working functionalities
- 30% marks for all security best practices implemented
- 15% marks for all additional fine tuning implemented