



Faculty of  
Electronic Engineering  
كلية الهندسة الإلكترونية



## Advanced programming Project

### Career Guidance System

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#### Section

## **Project Description:**

The "Career Guidance System" is a Java console application designed to assist individuals, particularly those in the field of Computer Science and Engineering, in exploring various career tracks within the technology industry. The program provides information about different job roles, their descriptions, required skills, and average salaries.

## **Key Features:**

### **❖Object-Oriented Design:**

Utilizes an object-oriented approach with separate classes for different job roles, encapsulating their properties and behaviors.

### ❖ Multiple Career Tracks:

Covers a diverse range of computer science career tracks, including Software Developer, Data Scientist, Network Engineer, Cybersecurity Analyst, Web Developer, Mobile Developer, Game Developer, UX Designer, and Technical Writer.

### ❖ Job Role Details:

Displays detailed information for each career track, such as job title, description, required skills, average salary, and specific attributes relevant to the role.

### ❖ External Resources:

Provides URLs to external resources (e.g., online courses) related to each job role, offering users the opportunity to explore further educational materials.

### ❖ User Interaction:

Engages users by presenting them with choices based on their interests and preferences, allowing them to select a career track for detailed information.

### ❖ Continuous Exploration:

Allows users to explore different career tracks continuously until they decide to exit the program.

### ❖ How to Use:

The program starts by welcoming the user and presenting choices based on different interests in computer science.

### ❖ Career Track Details:

After the user makes a selection, the program displays detailed information about the chosen career track.

### ❖ External Resources:

Provides relevant URLs for external resources related to the selected career track, encouraging users to explore further educational opportunities.

### ❖ Exit Option:

Users can exit the program at any time by entering option 10, accompanied by a farewell message.

### ❖ Classes and Design:

Main Class (Main.java): The main entry point of the program, responsible for user interaction and displaying career track details.

Job Role Classes (SoftwareDeveloper, DataScientist, Network Engineer, Cybersecurity Analyst, WebDeveloper, Mobile Developer, Game Developer, UX Designer, and Technical Writer)

Individual classes representing specific job roles, encapsulating details such as title, description, skills, and average salary.

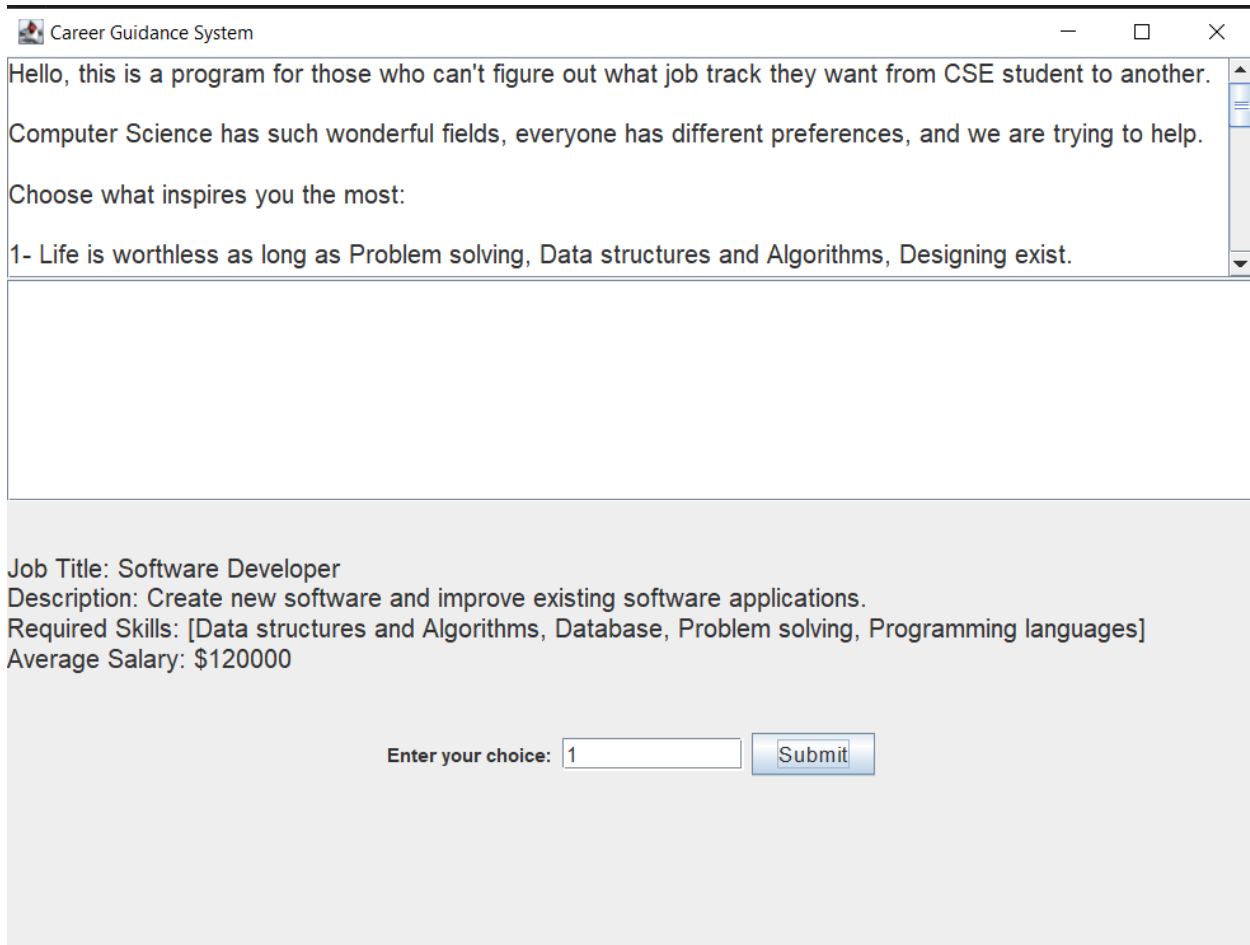
#### ❖ URL Handling:

Utilizes the `java.net.URL` class to handle URLs and provide external resources for further learning.

#### ❖ User Input Handling:

Uses the `Scanner` class for user input, allowing users to navigate through different career tracks.

## GUI FOR THE PROJECT



The screenshot shows a window titled "Career Guidance System". Inside, there is a text area with the following content:

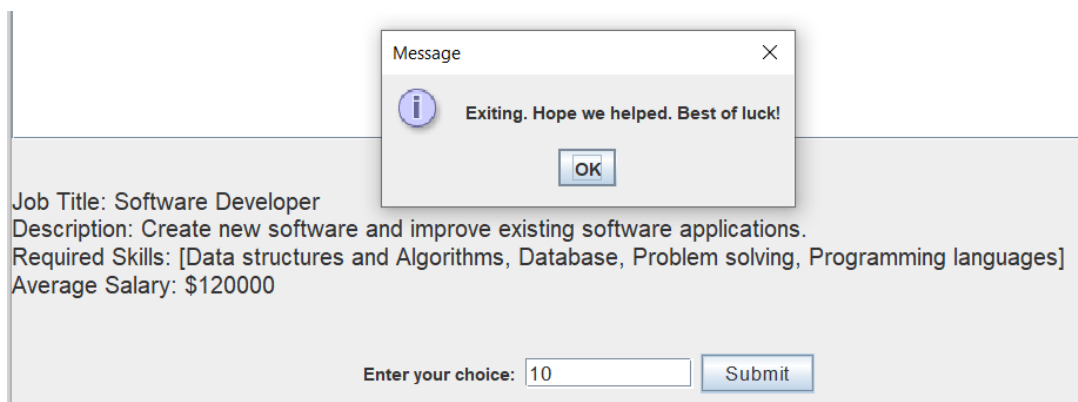
Hello, this is a program for those who can't figure out what job track they want from CSE student to another.  
Computer Science has such wonderful fields, everyone has different preferences, and we are trying to help.  
Choose what inspires you the most:  
1- Life is worthless as long as Problem solving, Data structures and Algorithms, Designing exist.

Below the text area, the following information is displayed:

Job Title: Software Developer  
Description: Create new software and improve existing software applications.  
Required Skills: [Data structures and Algorithms, Database, Problem solving, Programming languages]  
Average Salary: \$120000

At the bottom, there is a label "Enter your choice:" followed by a text input field containing the number "1" and a "Submit" button.

### Option to exit:



This screenshot shows the same GUI as above, but with an additional "Message" dialog box overlaid in the center. The dialog box contains an information icon, the text "Exiting. Hope we helped. Best of luck!", and an "OK" button.

Below the dialog box, the same job information is visible:

Job Title: Software Developer  
Description: Create new software and improve existing software applications.  
Required Skills: [Data structures and Algorithms, Database, Problem solving, Programming languages]  
Average Salary: \$120000

At the bottom, the "Enter your choice:" label is followed by a text input field containing the number "10" and a "Submit" button.