The Information Communication Student Activities Committee (ICSAC) of the IEEE Student Branch of SLTC organized a webinar series on Java programming as "Road to Codemania - Introduction to Java."

This webinar will be a foundation for those who are interested in Java programming. Further, this will be an excellent opportunity for the students to know the basic concepts of Java programming.

Along with the webinar series we planned to give the participants a group project as "Road to Codemania - Java Project" to complete. The project is based on Basic Java concepts that they learned through the webinars. We completed our webinars during August and September with an average of 200 participants.

- **Introduction to Road to Codemania Java Project**

In the next 2 weeks, you have to complete the Final Java Project of the "Road to Codemania" Webinar series. It is compulsory to form a group with 4 members (Between 2-4) to develop and submit your Java Application as same as you did the TMP Pre-Assessment. You have 21 days to complete the Project. The Deadline for the submission will be **18th of October 2020 Midnight.**

In addition,

It is compulsory to do research and self-learning to practise your Java Programming skills.

Self-learning is anything you learn outside a classroom environment by yourself without a set curriculum or examinations. Unlike traditional methods of schooling, your self-learning efforts are not measured by how well you perform in an exam. Besides the knowledge factor, self-learning also helps in developing your skill levels and enriches your experiences through practical applications.

So Here we recommend going through the following **Google folder with all Webinar Videos, Guest Speaker Slides, Java Codes, Video Tutorials, Online Courses,** which can be very supportive to your progress with the final Java Project. You must use your **SLTC e-mail** when accessing the google folder.

Link - **Learning Starter Pack - Road to Codemania**

Road to Codemania Java Project – Online Hotel Reservation Module

- A hotel wishes to make its reservations available online.
- Following is a list of assumptions about the "Online Reservation Module".

1. Any (room) booking is "Unconfirmed" until the hotel staff (Cashier/ Receptionist) makes it "Confirmed".

2. The customer may/ may not log in to make an Unconfirmed booking, but has to provide her personal and contact details to complete the booking.

3. The customer needs to register her user account with the booking system to enable her to log in to the system.

4. The customer's user account is uniquely identified by her user name (uname).

5. A "PIN" is generated for each Confirmed booking. A customer can have many PINs for different bookings. A PIN can never be repeated.

6. Each booking request/ operation in the system must check the following, before an Unconfirmed booking;

    i) if the requested number of rooms available for the specified booking date,
    ii) if the requested number of rooms can occupy the specified number of people.

    Must display the error messages according to errors

7. Each room of the hotel must belong to one Room Type, but a room type may have several rooms listed under that.

The main task is to produce a complete Object-Oriented Program done in Java language with the above functionality.

Additional Instructions

- You can list any additional assumptions you make for improved readability of your program.
- Your program must clearly implement the classes, objects, and their related interactions as appropriate.
- You can make any number of Java Classes as you desire, but we suggest you make the Java Classes as follows,
    1. **BookingRecord** – class for booking records with Room Type, Room Number, No of Beds, Price, Status Confirmed/Unconfirmed
    2. **User** – class for users with 2 subclasses for Customers and Staff. Must include Unique Username and Password
    3. **Room** – class for rooms with Room Type, Room Number, No of Beds, Price.
- You can have your choice but below has to be the minimum required methods for the JAVA PROJECT,
    1. Do a Booking
    2. Login Handling (Username, Password)
    3. New User Registration
- Should include a menu with a good flaw with Command Line Interface (CLI)

Java Project Evaluation

1. Constructing Main Classes – 25%
2. Using Java Object Oriented Concepts like Encapsulation, Inheritance, Polymorphism, Abstraction – 25%
3. Constructing Main Algorithms (Methods) with comments – 40%
4. Complete System without failure – 10%

At least 50% must be obtained to Earn the Standard Certificate.
If a group earned Between 45% - 49%, **Bonus*** Marks from TMP Pre Assessment will be added.

- **How to earn Honorary Certificate in Road to Codemania - Java Project**

Registrants who obtain above 80% from the final project will be awarded an Honorary Certificate.

Guidelines for Submission of Java Project

- Only the Group Leader must fill and submit the google form using SLTC Email. The submission link will be announced next week.
- It is compulsory to form a group with 4 members (Between 2-4) to develop and submit your Java Application
- Plagiarism of the Java Codes will be checked by using suitable software/tools. If any registrant is found guilty of plagiarism, the project will be rejected.
- The Java Project is collusion within the group. It cannot be copied from the Internet and other group projects. It must be a completely unique Group work.

If you face any problems when developing the Java Project, we recommend sending us an email through ieeeicsac@gmail.com .