LITHAN

Development of website for a Training Organization

Module Project

Module: Front End Web Development

Course: ITSF - Front End Web Development

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End Date	: 17/06/2022	**Enrollment ID**	:
Submission Date	: 18/06/2022	**Presentation Date**	:

Document History

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Version Number	Effective Date of release	Summary of Included Changes	Author
1	4th March 2016	First Edition	Satya CVS
2	7th April 2016	Changed for Module 2	Shrinivas K R
3	2nd April 2018	Changed for RQF	Shrinivas K R

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1. Project Definition

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❑ Project Definition

This project is about the MCQ System. This MCQ system must create using Java because Java is an excellent choice for developing systems. The education market wants to expand their market into the Information Technology subject areas for the part of their development. Therefore, their internship training is required to develop and develop software to assess subject knowledge. So, the company provided the MCQ system.

❑ Proposed Solutions

- Add Input user ID and password
- Develop a system like when finished answering one set of MCQs, the other MCQ sets will appear

2. Project Deliverables

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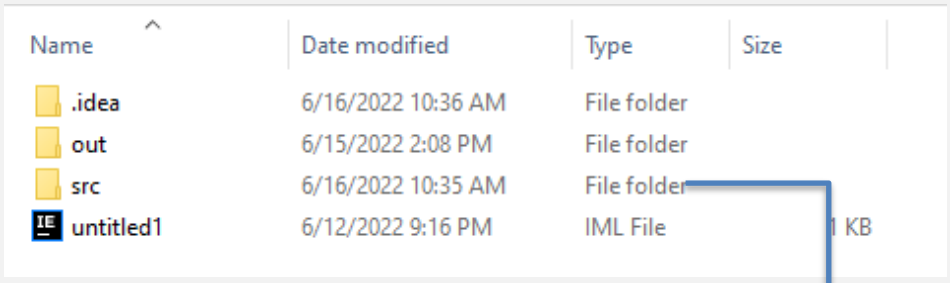
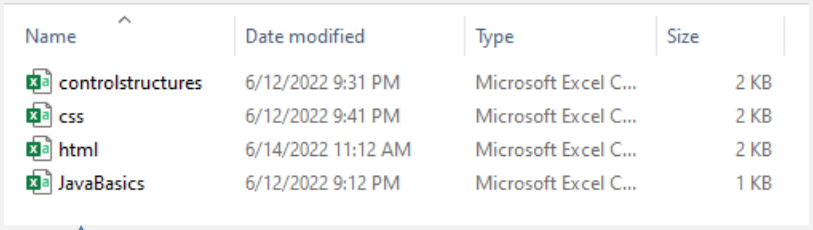
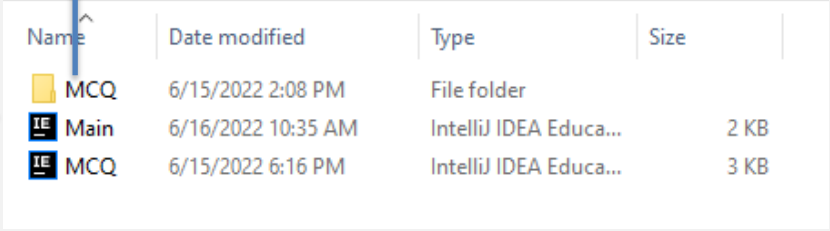
❑ Project Deliverables

- Source Codes
- MCQ folder with 4 CSV files
- Project Report
- Project Presentation

❑ List of Evidence







3. Project Milestones & Tasks

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Project Task ID	Project Task Description	Project Milestone ID
1	Create Requirement Specification	1
2	Develop Algorithm	1
3	Analysis and Design	2
4	Create the Application	2
5	Test the Application	3

4. Project Environment

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- **Technical Environment & Tools used**
  - IntelliJ
  - JDK
  - Microsoft Word
  - Microsoft Excel
  - Microsoft PowerPoint
  - Flow.Driwo
- **List of references**
  - w3school.com
  - youtube.com
  - Geeksforgeek.org

5. Development Tools

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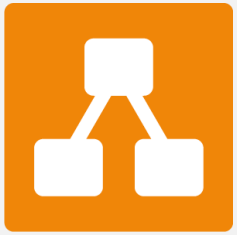
IntelliJ

MS Excel



Flow.Drawio

MS Word

MS PowerPoint

JDK

6. Project Design

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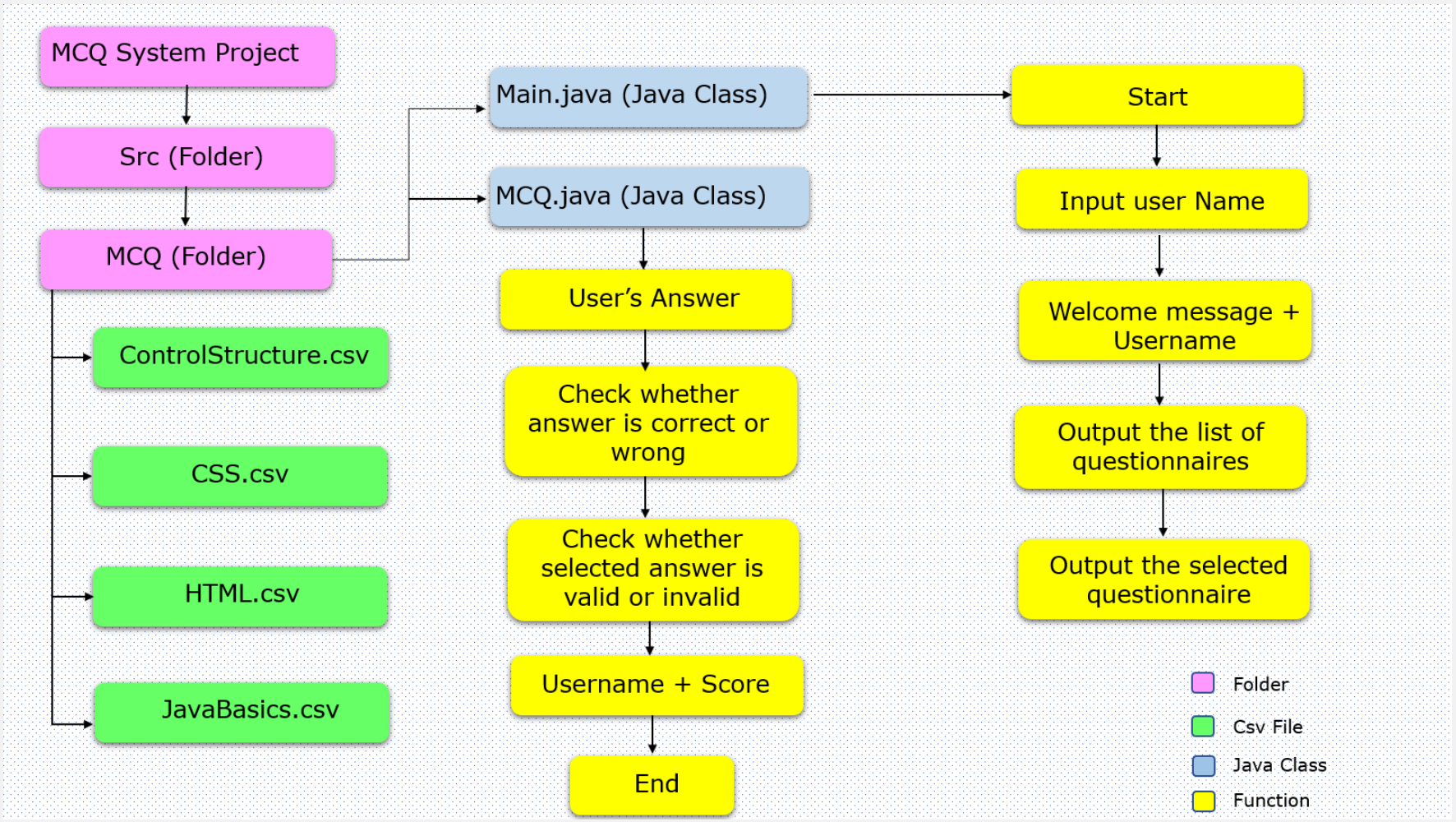

7.Classes & Methods

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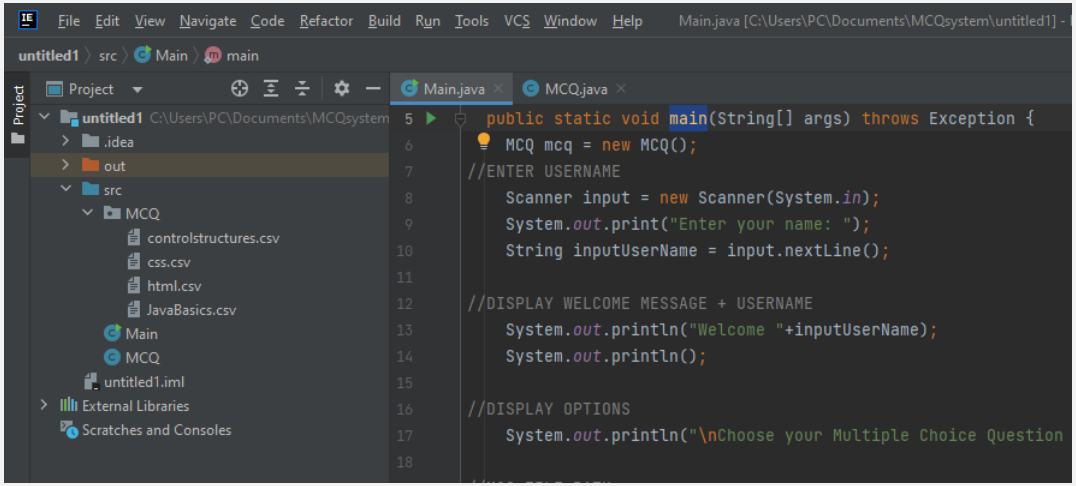
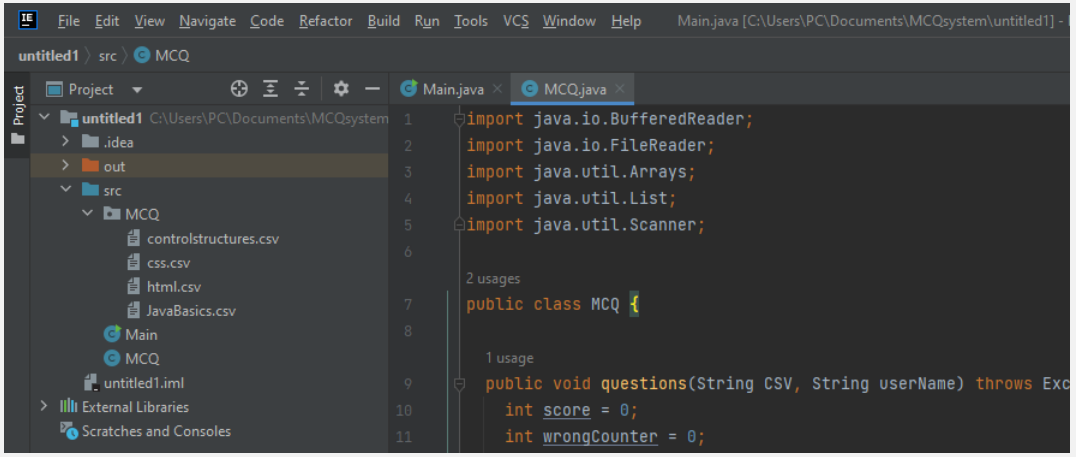
- Classes
  - 01) Main Class



  - 02)MCQ Class



7.Classes & Methods

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- Methods
  - 01) Generate File Names

```
static void generateFilesName(File[] listOfFiles) {
  for (File listOfFile : listOfFiles) {
    String fileName = listOfFile.getName();
    int extension = fileName.lastIndexOf( str: ".");
    if (extension > 0) {
      fileName = fileName.substring(0, extension);
      if (listOfFile.isFile()) {
        System.out.println(fileName.toLowerCase());
      }
    }
  }
}
```

8. Steps from coding to Execution

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- Application execution methods

JRE – Java Runtime Environment

Java Runtime Environment is a layer of software that runs on a computer's operating system software and provides class libraries and other resources needed to execute a specific java program.

It runs on any device supporting the java platform a& It is the topmost layer of the machine's OS

JIT – Just in Time compiler

JIT in Java is a mandatory part of JVM (Java Virtual Machine). It speeds up activation performance many times more than the previous level

8. Steps from coding to Execution

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The way that runs the program

Step 1 – Obtain user input using the “Scanner”

```
Scanner input = new Scanner(System.in);
System.out.print("Enter your name : ");
String inputUserName = input.nextLine();
```

Step 2 – Print the welcome message + username

```
Scanner input = new Scanner(System.in);
System.out.print("Enter your name : ");
String inputUserName = input.nextLine();
System.out.println("Welcome "+inputUserName);
System.out.println();
```

8. Steps from coding to Execution

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Step 3 –Read the CSV file

```
FileReader fr = new FileReader( fileName: "src/MCQ/" + CSV + ".csv");
```

Step 4 – output multiple question sets

```
System.out.println("\nChoose your Multiple Choice Question Set. The Options are : ");
File folder = new File( pathname: "src/MCQ");
File[] listOfFiles = folder.listFiles();
if (listOfFiles != null) {
  generateFilesName(listOfFiles);
}
```

```
static void generateFilesName(File[] listOfFiles) {
  for (File listOfFile : listOfFiles) {
    String fileName = listOfFile.getName();
    int extension = fileName.lastIndexOf( str: ".");
    if (extension > 0) {
      fileName = fileName.substring(0, extension);
      if (listOfFile.isFile()) {
        System.out.println(fileName.toLowerCase());
      }
    }
  }
}
```

8. Steps from coding to Execution

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Step 5 – output questions that are selected and multiple choice

```
System.out.println(listMcqStr.get(0));
for (int i = 1; i < 5; i++) {
  System.out.println(listMcqStr.get(i));
```

Step 6 – Input answers

```
// User Answer
System.out.print("Your Answer : ");
String userAnswer = sc.nextLine().toUpperCase();
```

Step 7 – Check user's answer is valid or invalid

```
boolean validAnswer = false;
while (!validAnswer) {
  if (userAnswer.equals("A") || userAnswer.equals("B") || userAnswer.equals("C") || userAnswer.equals("D")) {
    validAnswer = true;
  } else {
    System.out.println("Please select the available answer");
    System.out.print("Your Answer : ");
    userAnswer = sc.nextLine().toUpperCase();
  }
}
```

8. Steps from coding to Execution

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Step 7 – Check user's answer is correct or wrong

```
    System.out.println("\nYour Answer is : " + userAnswer);
    String correctAnswer = listMcqStr.get(5);

    if (userAnswer.equals(correctAnswer.substring(0, 1))) {
      System.out.println("Your answer is correct!");
      score++;
    } else {
      System.out.println("Wrong Answer. The Correct Answer is " + correctAnswer);
      wrongCounter++;
    }
    System.out.println();
  }
```

Step 8 – Calculate user score

```
    System.out.println(userName + ", you answered " + score
            + " Questions Right, " + wrongCounter + " Questions Wrong for a Total of 10 Questions. You scored "
            + (score * 10)
            + "%");
  }

}
```

8. Steps from coding to Execution

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The output of the Java Code:-

```
Enter your name: Chathu
Welcome Chathu


Choose your Multiple Choice Question Set. The Options are :
controlstructures
css
html
javabasics
Mention your choice : cs
Please type valid choice as mentioned
Mention your choice : css
1.CSS Stands for...
A.Color and style sheets
B.Cascading style sheets
C.Cascade style sheets
D.None of above
Enter your answer : B

Your Answer is : B
Your answer is correct!

2.What is the property used to change the bakground color of an element?
A.color
B.background-color
C.bgcolor
D.All of above
Enter your answer : B

Your Answer is : B
Your answer is correct!
```

n Control | Run | TODO | Problems | Terminal | Services | Build

up-to-date (7 minutes ago)

```
3.What is the selector used to select the elements that do not match the selectors?
A.:!selector
B.:not selector
C.:emptyselector
D.None of above
Enter your answer : F
Please select the valid answer
Enter your answer : B

Your Answer is : B
Your answer is correct!

4.Which property used to add shadows to the text?
A.text-shadow
B.text-storke
C.text-decoration
D.text-overflow
Enter your answer : C

Your Answer is : C
Wrong Answer. The Correct Answer is A.text-shadow

5.Whta is the corret syntax to select all paragaraph elements in a div element?
A.p
B.div p
C.div#p
D.div-p
Enter your answer : B

Your Answer is : B
Your answer is correct!
```

8. Steps from coding to Execution

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```
6.CSS property used to make the text bold is...
A.font-weight:bold
B.font:bold
C.weight:bold
D.style:bold
Enter your answer : A

Your Answer is : A
Your answer is correct!

7.HTML attribute used to define the internal stylesheet is..
A.<script>
B.<line>
C.style
D.<style>
Enter your answer : D

Your Answer is : D
Your answer is correct!

8.HTML attribute used to define the inline style is...
A.class
B.style
C.styles
D.None of above
Enter your answer : B

Your Answer is : B
Your answer is correct!

9.What is the correct syntax to give a line over test?
A.text-decoration:none
n Control  Run  TODO  Problems  Terminal  Services  Build
```

```
9.What is the correct syntax to give a line over test?
A.text-decoration:none
B.text-decoration:line-through
C.text-decoration:underline
D.text-decoration:overline
Enter your answer : D

Your Answer is : D
Your answer is correct!

10.Which type of CSS is used in below code?
A.Internal css
B.External css
C.Inline css
D.None of above
Enter your answer : C

Your Answer is : C
Your answer is correct!

Chathu, you answered 9 Questions Right, 1 Questions Wrong for a Total of 10 Questions. You scored 90%

Process finished with exit code 0
```

9.Development Process

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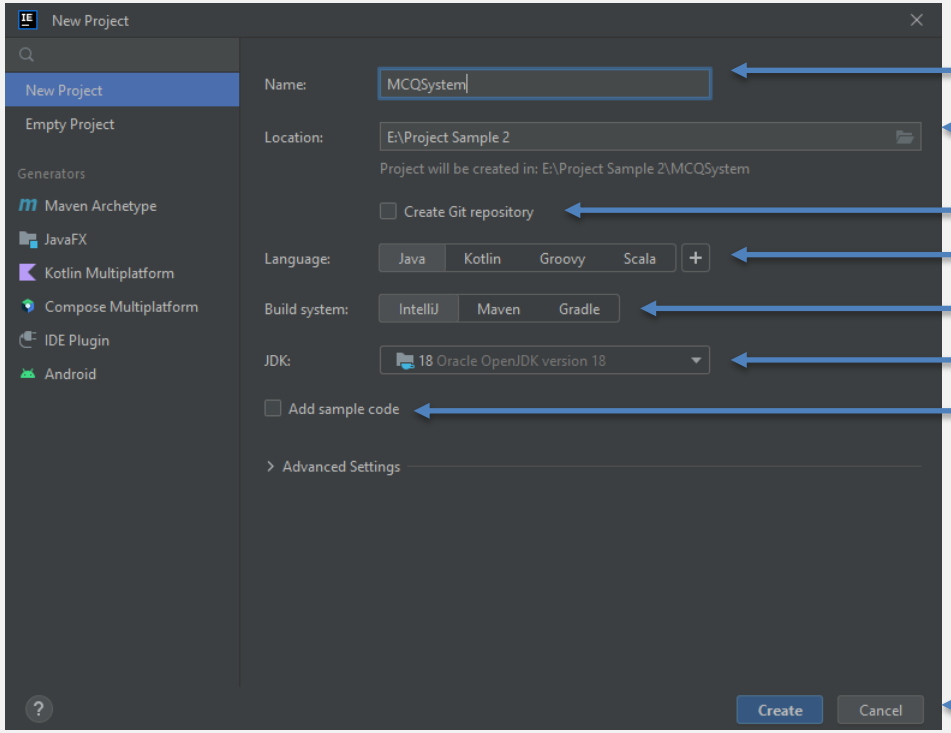
Step 1 – Open IntelliJ & Click New Project



Type project name without spacing

Select location to save project

If need create GIT repository, put a tick

Select language as "JAVA"

Select Build System as "IntelliJ"

Select JDK

Add tick to get sample code

Click create

9.Development Process

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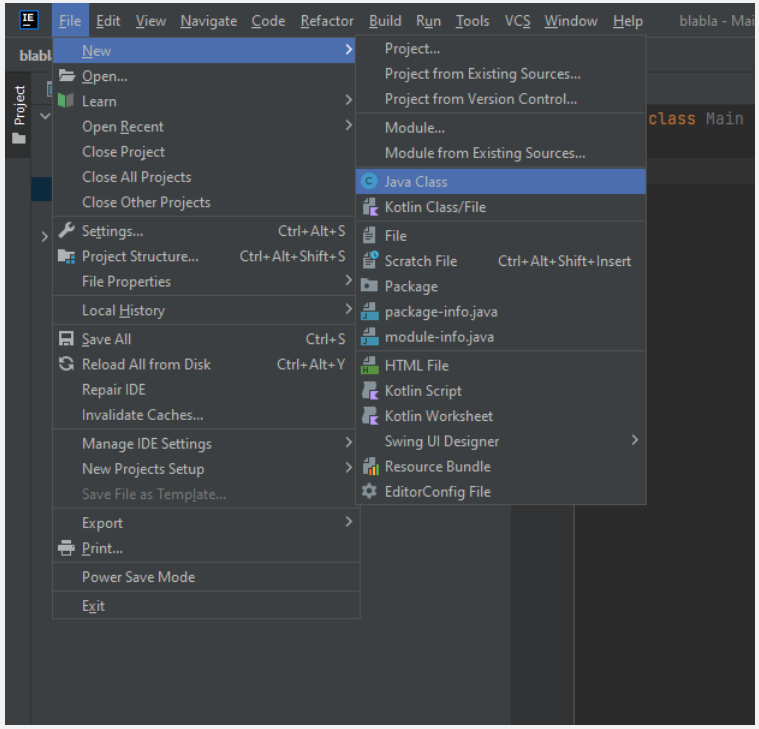
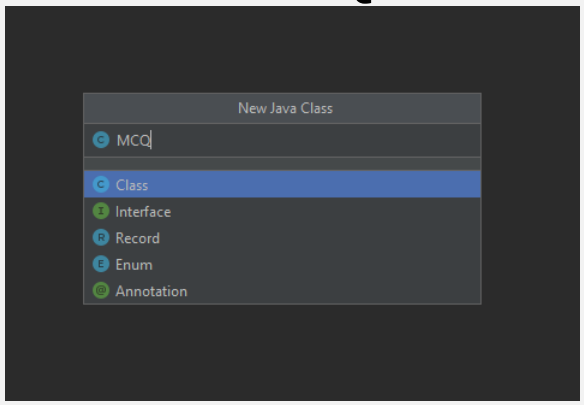
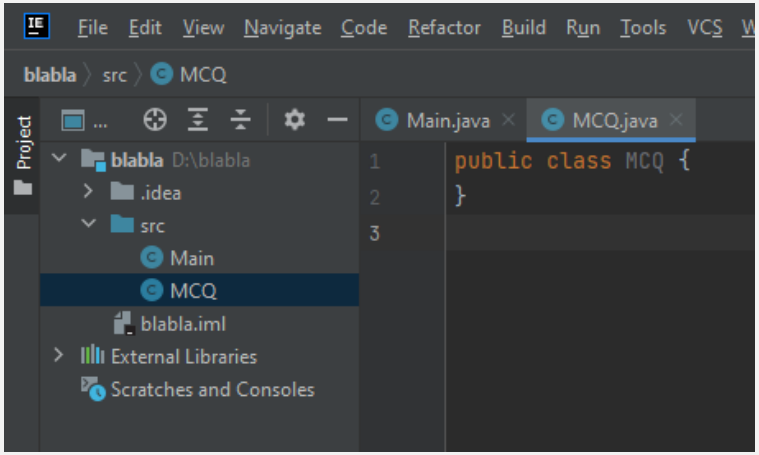
Step 2 – Create Java class

01)Click "**File >New>Java Class**" on the top left corner



02) Create a Java Class Named MCQ





9.Development Process

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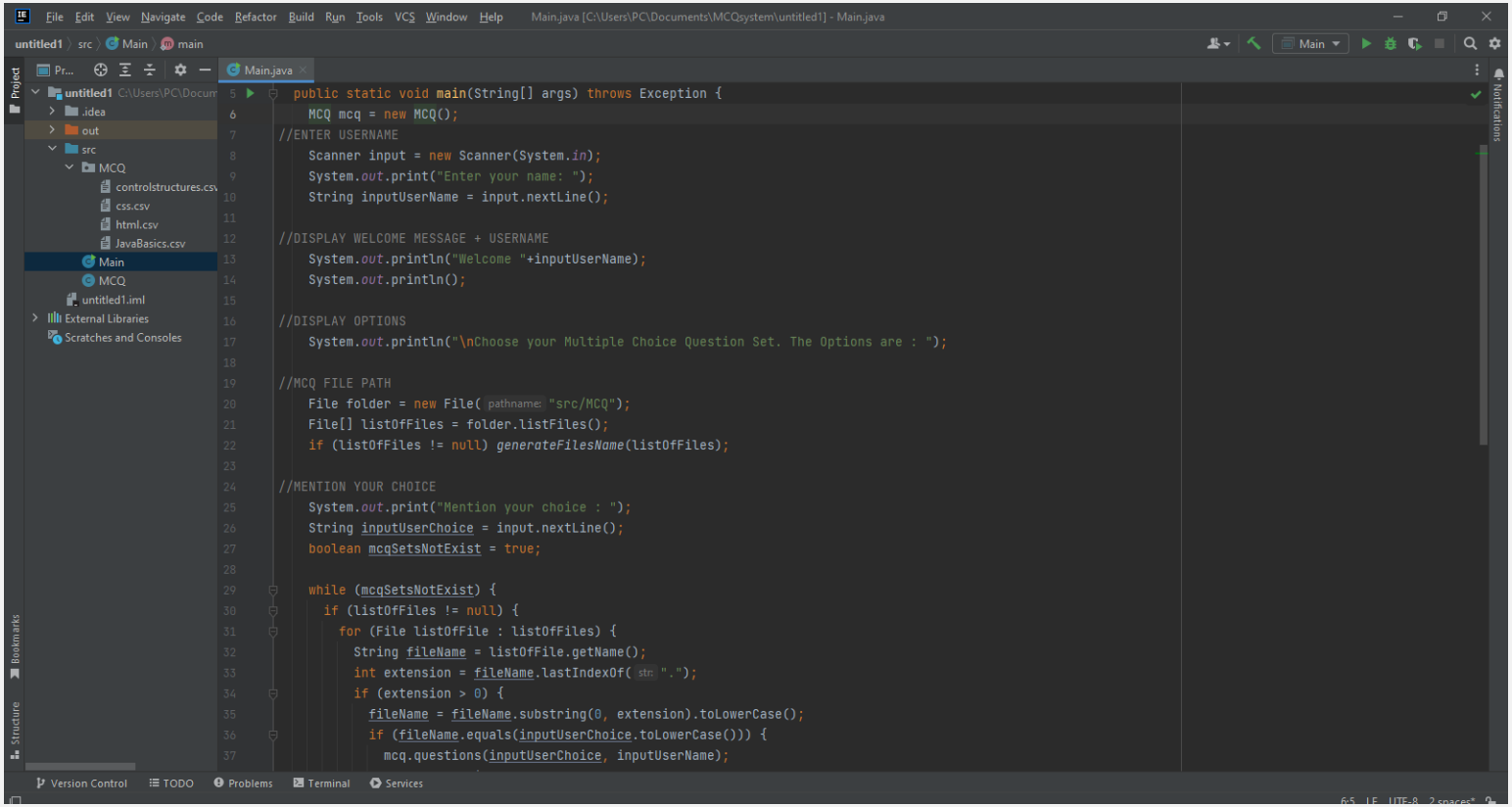
Step 3 – Code the Program



9.Development Process

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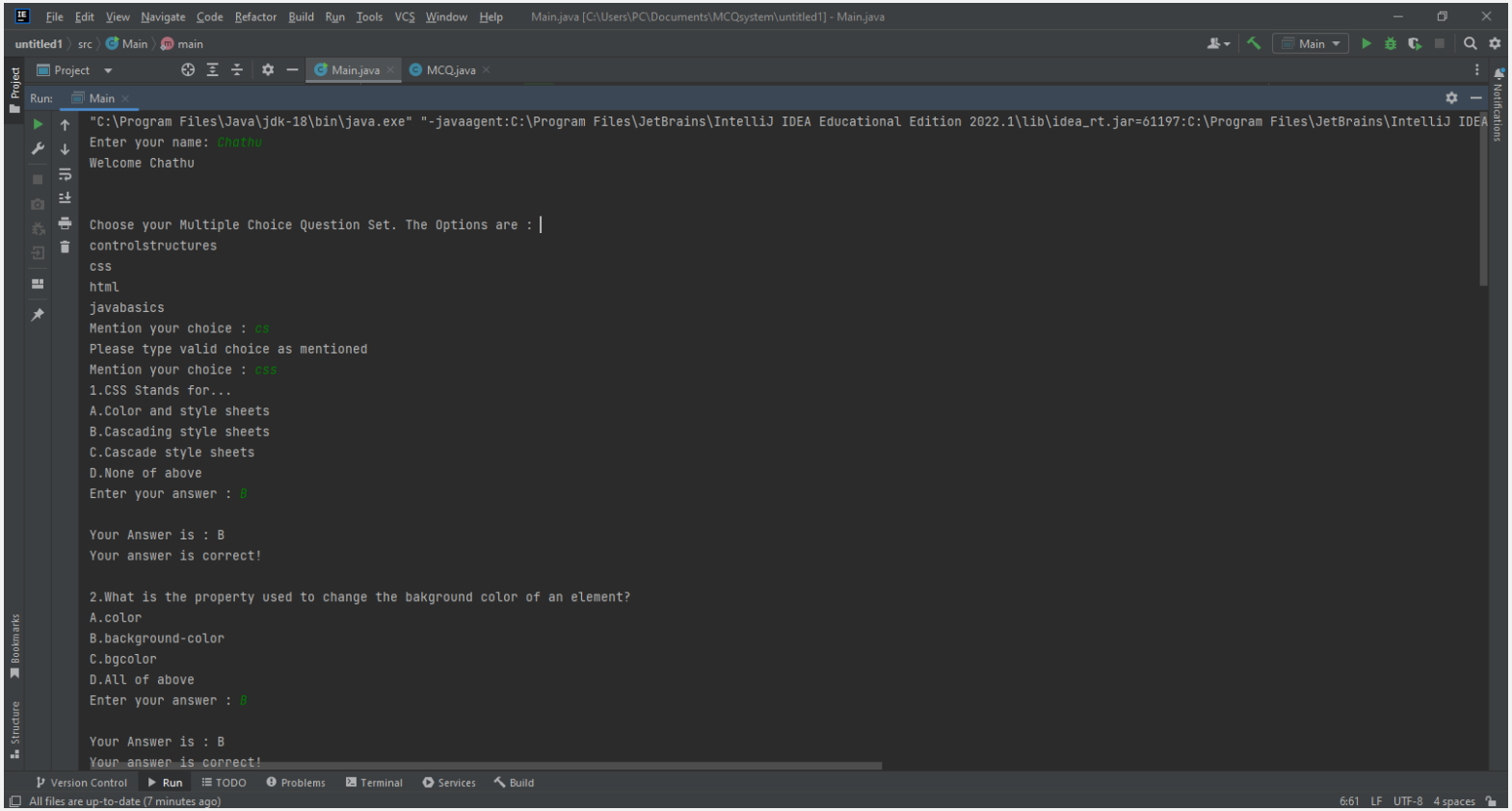
Step 4 – Run Program



10.Coding Standards

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01)**Naming Conventions** – The Java Naming Convention is a set of rules that you must follow when deciding what to identify your identities, such as class, package, variable, constant, method

```
static void generateFilesName(File[] listOfFiles) {
  for (File listOfFile : listOfFiles) {
    String fileName = listOfFile.getName();
    int extension = fileName.lastIndexOf( str: ".");
    if (extension > 0) {
      fileName = fileName.substring(0, extension);
      if (listOfFile.isFile()) {
        System.out.println(fileName.toLowerCase());
      }
    }
  }
}
```

```
  System.out.println(userName + ", you answered " + score
        + " Questions Right, " + wrongCounter + " Questions Wrong for a Total of 10 Questions. You scored "
        + (score * 10)
        + "%");
}
```

10.Coding Standards

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02) **Comments –** Comment can be used to explain Java code and make it more readable & Can easily find the coding sections

```
//ENTER USERNAME
    Scanner input = new Scanner(System.in);
    System.out.print("Enter your name: ");
    String inputUserName = input.nextLine();

//DISPLAY WELCOME MESSAGE + USERNAME
    System.out.println("Welcome "+inputUserName);
    System.out.println();

//DISPLAY OPTIONS
    System.out.println("\nChoose your Multiple Choice Question Set. The Options are : ");

//MCQ FILE PATH
    File folder = new File( pathname: "src/MCQ");
    File[] listOfFiles = folder.listFiles();
    if (listOfFiles != null) generateFilesName(listOfFiles);

//MENTION YOUR CHOICE
    System.out.print("Mention your choice : ");
    String inputUserChoice = input.nextLine();
    boolean mcqSetsNotExist = true;
```

03) **Maintain Indentation** – It is like formatting. It's easy to edit code, and shows the logic of the program in a well-organized way, making it easy for other users to read the code

04) **Maintain white space** – It is like formatting. It's easy to edit code, shows the logic of the program in a well organized way, making it easy for other users to read the code

Importance of Coding Standards

- Easy to find Code sections
- Reduce many problems & the risk of project failures
- Find and solve security issues

11.Milestone Feedback & Action taken

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Project Task ID	Milestone Feedback	Action Taken
1	Revise Project Report commented parts	yes
2	Revise Project Presentation commented parts	yes
3	Create flow chart advanced	yes

12.Project Result

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Output of the Java code (When the user select CSS,)

Input User Name

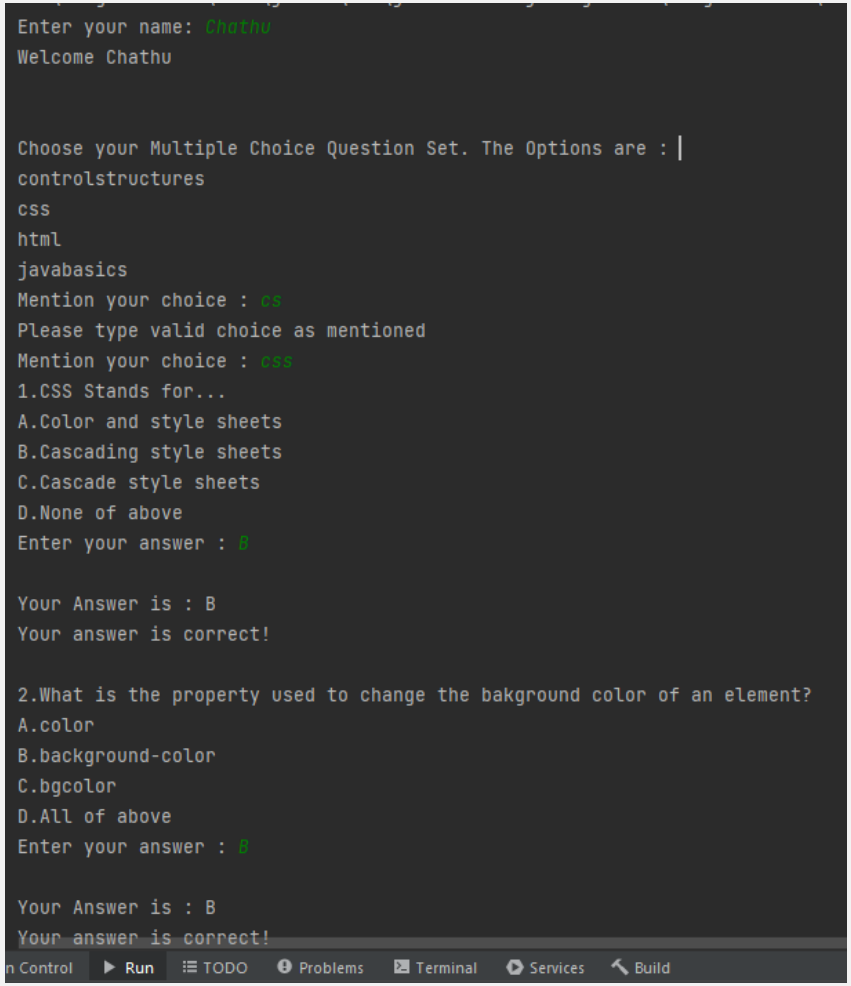
Welcome message + Username

Display Multiples choice question set

When user input invalid option

Display Selected MCQs set

If user input invalid answer



12.Project Result

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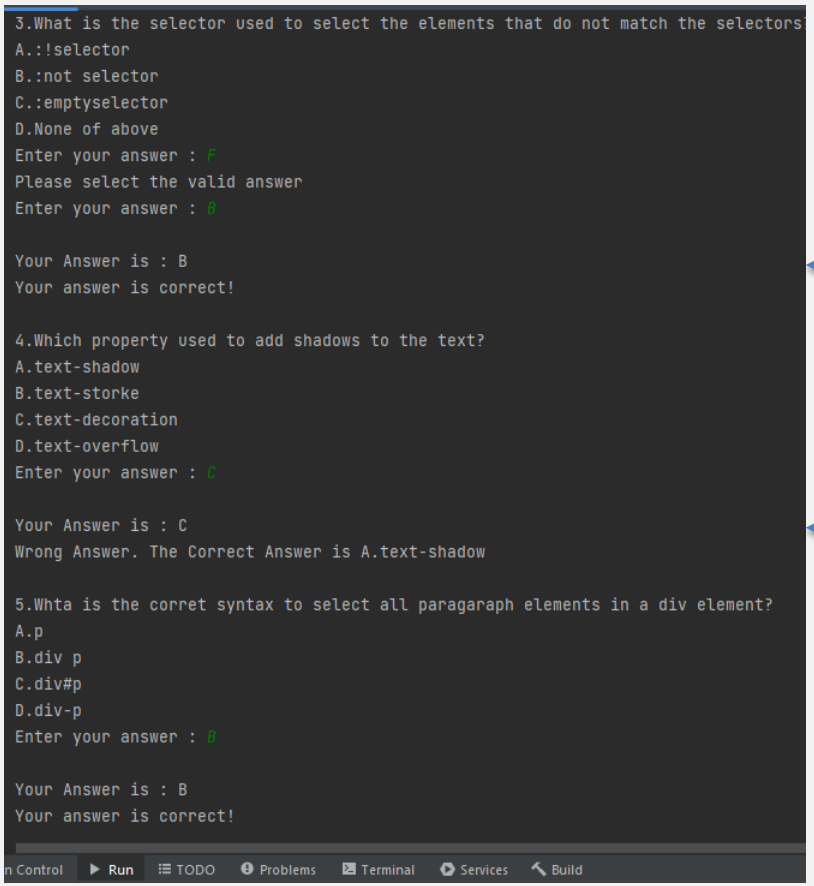
```
3.What is the selector used to select the elements that do not match the selectors
A.:!selector
B.:not selector
C.:emptyselector
D.None of above
Enter your answer : F
Please select the valid answer
Enter your answer : B

Your Answer is : B
Your answer is correct!

4.Which property used to add shadows to the text?
A.text-shadow
B.text-storke
C.text-decoration
D.text-overflow
Enter your answer : C

Your Answer is : C
Wrong Answer. The Correct Answer is A.text-shadow

5.Whta is the corret syntax to select all paragaraph elements in a div element?
A.p
B.div p
C.div#p
D.div-p
Enter your answer : B

Your Answer is : B
Your answer is correct!
```



When user input correct answer

When user input wrong answer

12.Project Result

LITHAN

```
6.CSS property used to make the text bold is...
A.font-weight:bold
B.font:bold
C.weight:bold
D.style:bold
Enter your answer : A

Your Answer is : A
Your answer is correct!

7.HTML attribute used to define the internal stylesheet is..
A.<script>
B.<line>
C.style
D.<style>
Enter your answer : D

Your Answer is : D
Your answer is correct!

8.HTML attribute used to define the inline style is...
A.class
B.style
C.styles
D.None of above
Enter your answer : B

Your Answer is : B
Your answer is correct!

9.What is the correct syntax to give a line over test?
A.text-decoration:none
n Control  Run  TODO  Problems  Terminal  Services  Build
```

```
9.What is the correct syntax to give a line over test?
A.text-decoration:none
B.text-decoration:line-through
C.text-decoration:underline
D.text-decoration:overline
Enter your answer : D

Your Answer is : D
Your answer is correct!

10.Which type of CSS is used in below code?
A.Internal css
B.External css
C.Inline css
D.None of above
Enter your answer : C

Your Answer is : C
Your answer is correct!

Chathu, you answered 9 Questions Right, 1 Questions Wrong for a Total of 10 Questions. You scored 90%

Process finished with exit code 0
```

Print "No of correct answers + No of wrong answers + Score

12.Project Result

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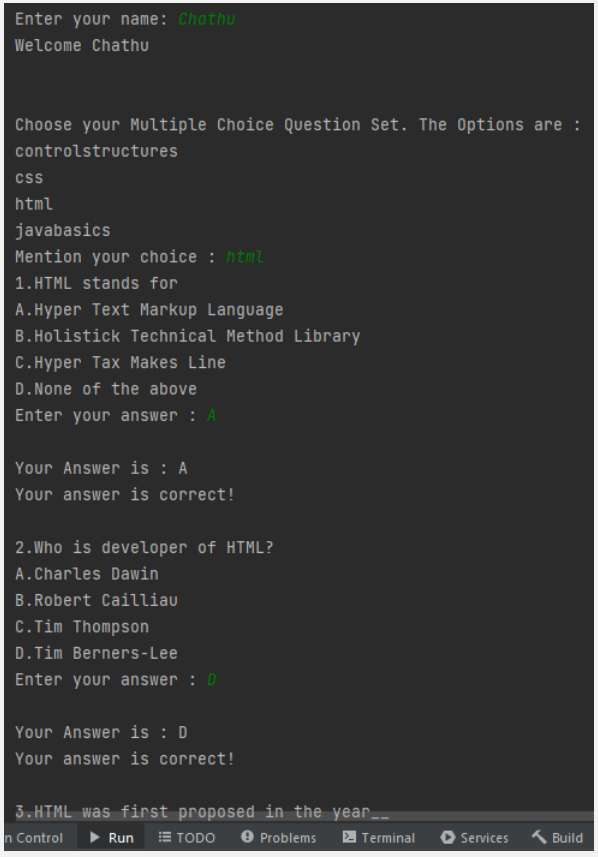
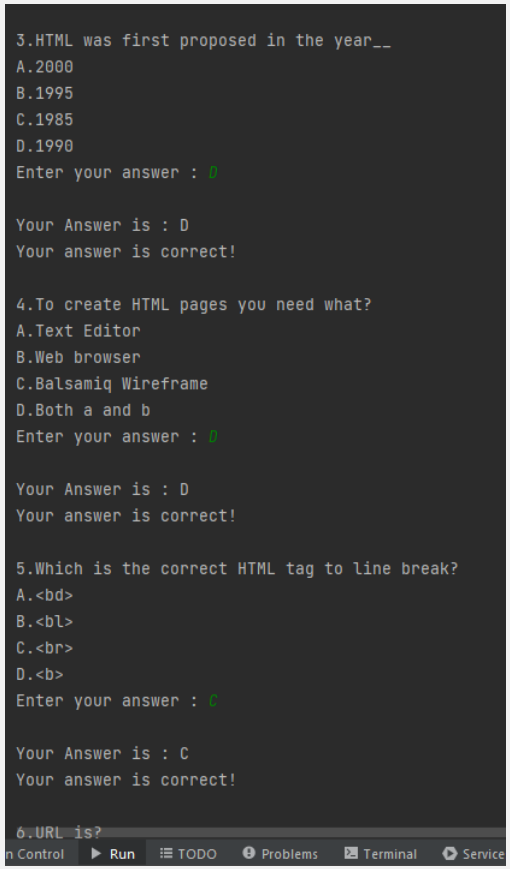
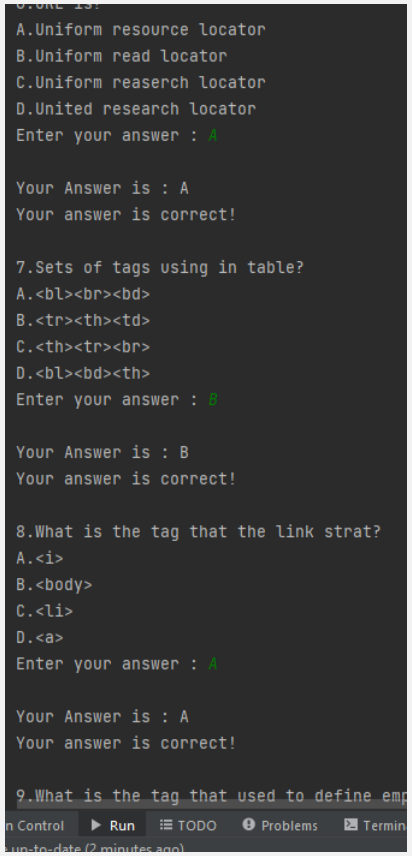
Output of the Java code (When the user select HTML,)

Display HTML MCQs







12.Project Result

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Output of the Java code (When the user select Control Structure)

Display Control Structure MCQs

```
Enter your name: Chathu
Welcome Chathu


Choose your Multiple Choice Question Set. The Options are :
controlstructures
css
html
javabasics
Mention your choice : controlstructures
1.How many choices are possible when using a single if-else statement?
A.1
B.3
C.2
D.4
Enter your answer : C

Your Answer is : C
Your answer is correct!

2.Which of these is used to add a third or fourth etc outcome to a scenario?
A.otherwise
B.if
C.else if
D.elsa
Enter your answer : C

Your Answer is : C
Your answer is correct!

3.How many "else" statements can you pair with a single "if" statement
n Control  Run  TODO  Problems  Terminal  Services  Build
```

```
3.How many "else" statements can you pair with a single "if" statement
A.1
B.<20
C.<10
D.As many as is needed
Enter your answer : A

Your Answer is : A
Your answer is correct!

4.How many "else if" links can you have in an "if else if" ladder?
A.<10
B.<30
C.<20
D.As many as is needed
Enter your answer : D

Your Answer is : D
Your answer is correct!

5.Which of the following for loops will be an infinite loop?
A.for(;;)
B.for(i = 0; ;i++)
C.for(i = 0;i < 1;i--)
D.All of the above
Enter your answer : D

Your Answer is : D
Your answer is correct!

6.What is the selection statments test only for equality?
n Control  Run  TODO  Problems  Terminal  Services  Build
```

12.Project Result

LITHAN

Output of the Java code (When the user select Java Basics)

Display Java Basics MCQs

```
Enter your name: Chathu
Welcome Chathu


Choose your Multiple Choice Question Set. The Options are :
controlstructures
css
html
javabasics
Mention your choice : jabobasics
Please type valid choice as mentioned
Mention your choice : javabasics
1.Inventor of Java Programming is..?
A.Guido Van Rossum
B.Dennis Ritchie
C.James Gosling
D.Bjarne Stroustrup
Enter your answer : C

Your Answer is : C
Your answer is correct!

2.Is Java case sensitive?
A.Depends on compiler
B.True
C.False
D.May be True or Flase
Enter your answer : B
```

```
3.Which year Java released?
A.1196
B.1993
C.1995
D.1991
Enter your answer : C

Your Answer is : C
Your answer is correct!

4.Which is the advantage of java?
A.Portable
B.simple
C.Secure
D.All of above
Enter your answer : D

Your Answer is : D
Your answer is correct!

5.What is used to compile debug execute the Java Programs?
A.JDK
B.JRE
C.JIT
D.JVM
Enter your answer : A

Your Answer is : A
Your answer is correct!

6.There are ... Datatype in java
```

ion Control | Run | TODO | Problems | Terminal | Services | Build

13.Project Improvements

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❑ Project Improvements

- Add 2 attempts for MCQs
- Input ID
- Input password
- Develop a system like when finished answering one sets of MCQs, the other MCQ sets will appear