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Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

CSE1007 Java PROGRAMMING LAB

Winter Semester 2020-21

TERM END LAB

COURSE CODE	COURSE TITLE	CLASS NBR	SLOT
CSE1007	Java Programming	VL2020210504173	L21+L22

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Q5) (a)Design and implement an application *Password.java* that produces and prints a random password. The password is composed of random digits 0-9 and characters a-z. The first element is a character, the second is a digit, then a character, a digit, a character, a digit, a character, and a digit (8 elements in total). An example is: e5c8a0b6

Ans5) (a)

ALGORITHM:

Step 1: import the java.util.* library in order to use the Random() method;

Step 2: Specify the length of the password as 8 in main function and pass it into another function named passwordGenerator(int len).

Step 3: Delcare all the necessary characters in the form on String, such as Small_chars = 'abcdefghijklmnopqrstuvwxyz' and numbers='1234567890'.

Step 4: Using the Random() method, generate a random character from both the Strings and store it in a String alternatively (ie: small_char and then numbers).

Step 5: Return the output password thus generated.

Step 6: Print the random password in console.

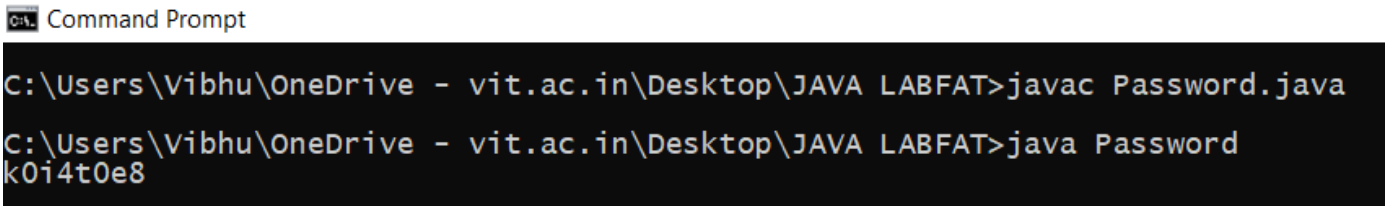
CODE:

```
import java.util.*;

public class Password{
    public static void main(String[] args)
    {
        int length = 8;
        System.out.println(generatePassword(length));
    }

    static char[] generatePassword(int len){
        String Small_chars = "abcdefghijklmnopqrstuvwxyz";
        String numbers = "0123456789";
        Random rndm_method = new Random();
        char[] password = new char[len];

        password[0]=Small_chars.charAt(rndm_method.nextInt(Small_chars.length()));
        for (int i = 0; i < len; i+=2)
        {
            password[i] = Small_chars.charAt(rndm_method.nextInt(Small_chars.length(
));

        }
```

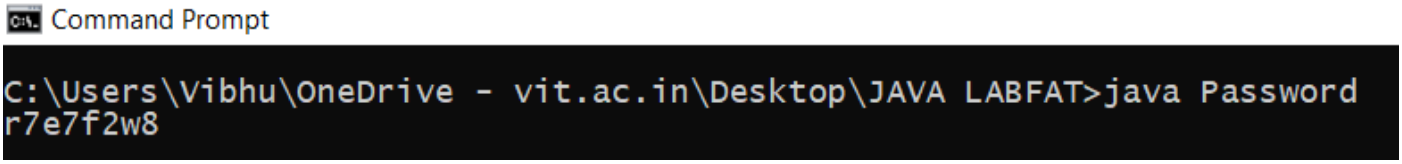
```
            for (int i = 1; i < len; i+=2)
            {
                password[i] = numbers.charAt(rndm_method.nextInt(numbers.length()));

            }
            return password;
        }
    }
```

OUTPUT:

Test Case1:



Test Case2:



Q5) (b) Create a JavaFx application to enter a building name in our university. When a user clicks a button, display (in new text field) school names located in the building.

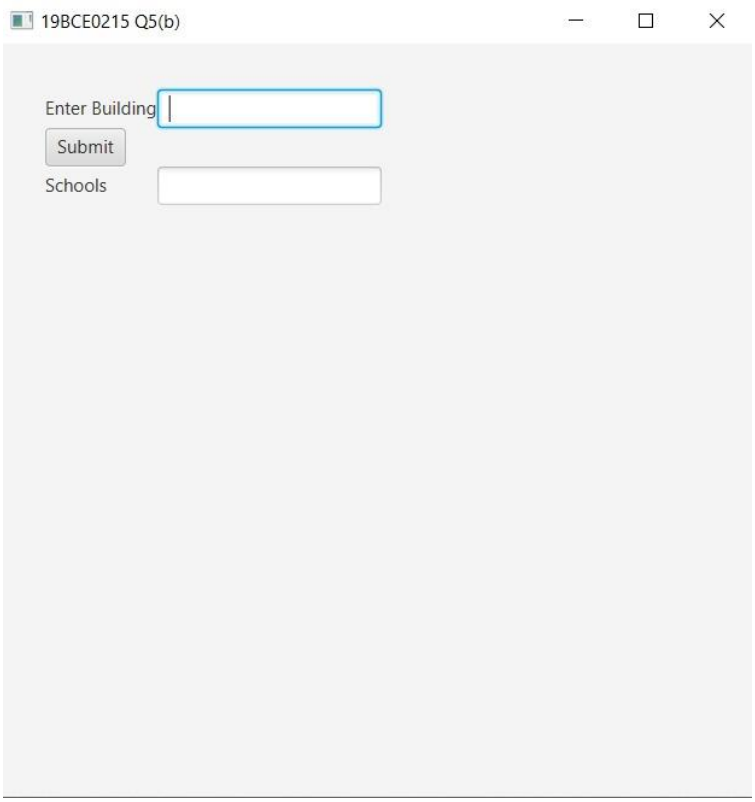
Ans5) (b)

CODE:

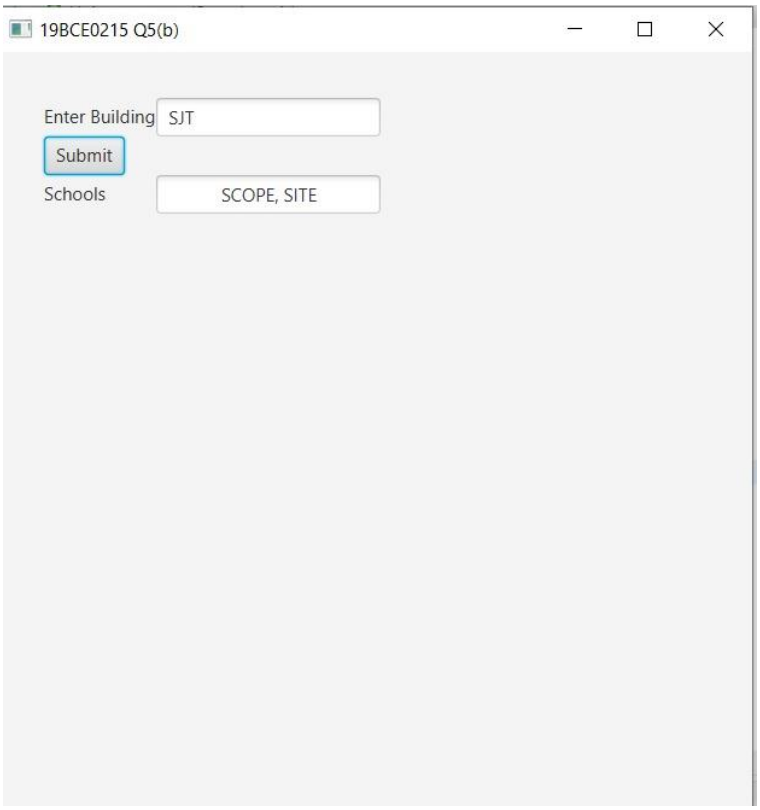
```
import javafx.application.Application;
import javafx.geometry.Insets;
import javafx.geometry.Pos;
import javafx.scene.control.*;
import javafx.stage.*;
import javafx.scene.*;
import javafx.scene.layout.GridPane;
import javafx.event.ActionEvent;
import javafx.event.EventHandler;

public class Univ extends Application {

    public static void main(String[] args) {
        launch(args);
    }

    @Override
      public void start(Stage primaryStage) throws Exception{
```

```
        Label building = new Label("Enter Building");
        TextField tf1 = new TextField();
        TextField tf2 = new TextField();
        Label Schools = new Label("Schools");
        Button display = new Button("Submit");

        display.setAlignment(Pos.CENTER);

        tf2.setAlignment(Pos.CENTER);
        display.setOnAction(new EventHandler<ActionEvent>() {
            @Override
            public void handle(ActionEvent arg0) {
                String build = tf1.getText();
                String schls = "";
                if(build.equals("SJT")) {
                    schls += "SCOPE, SITE";
                }else if(build.equals("TT")) {
                    schls += "SELECT, SENSE, SAS, SSL";
                }else if(build.equals("SMV")) {
                    schls += "SBST, Catering, Hotel Management";
                }else if(build.equals("GB")) {
                    schls += "VSPARC, VITBS, VSIGN ";
                }else if(build.equals("GDN")) {
                    schls += "SMBS, SMEC, SCALE, SCHEME, VSPARC";
                }
                tf2.setText("Schools in this Building : ");
                tf2.setText(schls);
            }
        });
        GridPane root = new GridPane();
        root.setPadding(new Insets(30, 30, 30, 30));
        root.setVgap(0);
        root.setHgap(0);
        root.addRow(0, building, tf1);
        root.addRow(1, display);
        root.addRow(2, Schools ,tf2);

        Scene scene=new Scene(root,500,500);
        primaryStage.setScene(scene);
        primaryStage.centerOnScreen();
        primaryStage.setTitle("19BCE0215 Q5(b)");
        primaryStage.show();
    }
}
```

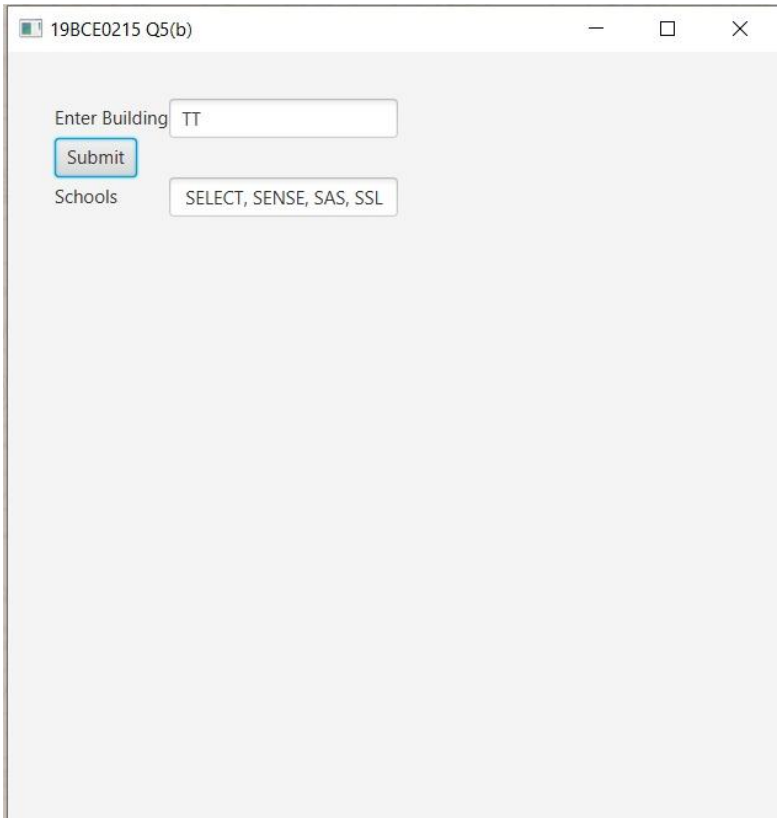
OUTPUT:



Test Case1:



Test Case2:


19BCE0215 Q5(b)
Enter Building
TT
Submit
Schools
SELECT, SENSE, SAS, SSL