CSA0914- Programming with Java for Respberry Pi

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Assignment - 1

(1) Student Grading system:-

```
import java.util.*;
Public class system {
Public static void main(String[] args){
    scanner sc = new scanner(system.in);
    string Grading;
   do{
    S.o.P("Enter the student's score);
    int score = sc.nextInt();
    String grade;
    if(score >= 90){
        grade = "A";
    }
   else if(score >= 80){
        grade = "B";
   }
   else if(score >= 70){
        grade = "C";
   }
   else if(score >= 60){
        grade = "D";
   }
   else {
        grade = "F";
   }
```

```
        S.o.p("Grade "+grade);
        S.o.p("Do you want to enter another score ? (Yes/No)");
            Grading = scanner.next();
        }
        while(Grading.equalsIgnoreCase("yes"));
        }
    }
```

output :-

Enter the students score : 85

Grade : B

Do you want to enter another score ? (Yes/No) : No

Number Guessing Game :

```
Package Pratice;
import Java.Util.Random;
import Java.Util.Scanner;

Public class Saveetha {
  Public Static void main(String[] args){
      Scanner scanner = new Scanner(System.in);
      Random Random = new Random();
        boolean PlayAgain = true;

      while(PlayAgain){
      int numberToGuess = random.nextInt(10)+1;
        int maxAttempts = 3;
        boolean hasGuessedCorrectly = false;

        S.o.p("welcome to the Number Guessing Game!")
```

```
S.O.P("Guess the number b/w 1 to 10 - You have " + maxAttempts + "
                attempts ");
for(int attempt = 1; attempt <= maxAttempts; attempt++){
    S.O.P("Attempt " + attempt + ": ");
    int playerGuess = scanner.nextInt();
    if(playerGuess < numberToGuess){
        S.O.P("Too low.");
    }else if(playerGuess > numberToGuess){
        S.O.P("Too High.");
    }else{
    S.O.P("Correct! You guessed it in " + attempt + "
                attempts.");
    hasGuessedCorrectly = true;
    break;
    }
}
if(!hasGuessedCorrectly){
    S.O.P("Sorry, You've used all your attempts.
            The correct number was " + numberToGuess);
}
S.O.P("Do you want to play again? (Yes/No): ");
String response = scanner.next().trim().toLowerCase();
if(!response.equals("yes")){
    playAgain = false;
}
}
```

```
            S.o.p("Thank you for playing!");
            }
        }
```

O/P:-

```
Attempt 1 : 6
Too low
Attempt 2 : 8
Too low
Attempt 3 : 9
correct ! you guessed it in 3 attempts.
```

Multiplication Table:-

```
import java.util.Scanner;
public class saveetha {
 Public static void main(String[] args){
 Scanner input = new Scanner(System.in);
 int n, i, t;
  t = input.nextInt();
  n = input.nextInt();
    for(i = 0; i<=n; i++){
       S.o.p(t+"*"+i+"="+t*i);
    }
 }
}
```

I/P: t = 5
n = 6

5 * 1 = 5

5 * 2 = 10

5 * 3 = 15

5 * 4 = 20

5 * 5 = 25

5 * 6 = 30

Even and odd number counter:-

```
import java.util.scanner;
Public class charan{
   Public static void main(String[] args){
   scanner input= new scanner(system.in);
     int n, ec=0; oc=0;
     n=input.nextInt();
     intarr[]=new int[n];
      arr[i] = input.nextInt();
      for(i=0; i<n; i++){
          if[arr[i]% 2 ==0)
          {
            ec++;
          }else {
                oc++;
        }
      }
     s.o.p("even count is:" + ec);
     s.o.p("odd count is:" +oc);
   }
}
```

O/P:- N=3

12 34 56

event count is :3 odd count is : 0,

Simple ATM Simulation :-

```
import java.util.Scanner;

    pubic class charan{
        public static void main(string [] args){
            Scanner input = new Scanner(system.in)
                double balance = 1000.0;
                  boolean running = true;
            while(running){
                S.o.p("Menu:");
                S.o.p(" 1. check Balance ");
                S.o.p(" 2. Deposit Money ");
                S.o.p(" 3. Withdraw Money ");
                S.o.p(" 4. Exit ");
                S.o.p(" choose an option (1-4):");

            int choice = input.nextInt();

          switch(choice)
            case 1:
              S.o.p(" current Balance: $" + balance);
              break;

            case 2:
            S.o.p(" Enter amount to deposit : $");
            double deposit = input.nextDouble();
              if(deposit > 0){
                  balance t = deposit;
              S.o.p(" Deposited : $" + deposit );
              }else{
              S.o.p(" Invalid deposit amount. ");
```

```
    }
    break;
ase 3:
    S.o.p("Enter amount to withdraw: $");
        double withdraw = input.nextDouble();
            if(withdraw >0){
                if( withdraw <= balance){
                    balance -= withdraw;
                S.o.p("Withdraw: $" +withdraw);
                }else{
                    S.o.p("Invalid withdrawal amount.");
                }
                brak;

            case 4:
                s.o.p("Exiting...");
                running = false;
                break;

            default:
            S.o.p("Invalid choice. Please Enter a number
                                        b/w 1 and 4.");
                break;
        }
    }
}
```

output:

ATM Menu:

1- check Balance

2- Deposit Money

3- withdraw Money

4- Exit

Choose an option (1-4): 1

Your current balance : $: $1000.0

choose an option (1-4): 2

Enter amount to deposit : $200

Choose an option (1-4): 3

Enter amount to withdraw: $100

Choose an option (1-4): 4

Thank you for using ATM - Goodbye!