

## ASSIGNMENT-1

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for Raspberry Pi

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### Student Grading system

```
import java.util.*;  
public class System {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        String Grading;  
        do {  
            System.out.println("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 >= 60) {  
                grade = "D";  
            }  
            else {  
                grade = "F";  
            }  
            System.out.println("Grade" + grade);  
            System.out.println("Do you want to enter another score (yes/no)");  
        } while (true);  
    }  
}
```

```

Grading = scanner.next();
}
while (Grading.equals.ignorecase("yes"));
{
    int score = scanner.nextInt();
    System.out.println("Score is " + score);
    if (score < 60)
        System.out.println("Grade is F");
    else if (score < 70)
        System.out.println("Grade is D");
    else if (score < 80)
        System.out.println("Grade is C");
    else if (score < 90)
        System.out.println("Grade is B");
    else
        System.out.println("Grade is A");
    System.out.print("Do you want to enter another score? (Yes/No) : ");
    String ans = scanner.next();
}

```

## 2. Number Guessing Game

```

package practice;
import java.util.Random;
import java.util.Scanner;
public class saveetka {
    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 hasGussedCorrectly = false;
            System.out.print("Welcome to Java");
        }
    }
}

```

```

for (i = 1; i <= n; i++)
{
    System.out.print("attempt" + i + " enter the guess");
    int playerGuess = a.nextInt();
    if (playerGuess == numberToGuess)
    {
        System.out.println("Correct guess");
        break;
    }
    else if (playerGuess > numberToGuess)
    {
        System.out.println("to high guess");
    }
    else if (playerGuess < numberToGuess)
    {
        System.out.println("to low guess");
    }
}
System.out.println("Attempts completed");
System.out.println("random guess is:" + numberToGuess);
}

```

Output:-

Welcome to game  
attempt 1 enter the guess  
5  
to low guess  
attempt 2 enter the guess  
6  
to low guess

attempt 3 enter the guess  
9  
Correct guess  
random guess is 9

### 3. Multiplication Table Generator:

```
import java.util.Scanner;  
public class MultiplicationTableGenerator {  
    public static void main(String[] args)  
    {  
        Scanner scanner = new Scanner(System.in);  
        System.out.print("Enter the number:");  
        int number = scanner.nextInt();  
        System.out.print("Enter the range:");  
        int range = scanner.nextInt();  
        for(int i=1; i<=range; i++)  
        {  
            System.out.printf(number + " x " + i + " = " + (number*i));  
        }  
    }  
}
```

#### Output:-

Enter the Number = 5

Enter the range = 10

$$5 \times 1 = 5$$

$$5 \times 2 = 10$$

$$5 \times 3 = 15$$

$$5 \times 4 = 20$$

$$5 \times 5 = 25$$

$$5 \times 6 = 30$$

$$5 \times 7 = 35$$

$$5 \times 8 = 40$$

$$5 \times 9 = 45$$

$$5 \times 10 = 50$$

## \* Even and Odd number Counter

```
public class EvenOddCounter {
    public static void main (String [] args) {
        int [] numbers = {2,3,4,5,6};
        int evenCounter = 0;
        int oddCount = 0;
        int evenSum = 0;
        int oddSum = 0;
        for (int number : numbers) {
            if (number % 2 == 0) {
                evenCounter++;
                evenSum += number;
            } else {
                oddCount++;
                oddSum += number;
            }
        }
        System.out.print("Even Count: " + evenCounter);
        System.out.print("Even Sum: " + evenSum);
        System.out.println("Sum of even numbers: " + evenSum);
        System.out.println("Sum of odd numbers: " + oddSum);
    }
}
```

### Output:-

input= {2,3,4,5,6}

Even Count = 3

odd Count = 2

## 5 Simple ATM simulation:

```
import java.util.Scanner;  
public class SimpleATM {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        double balance = 1000.0;  
        boolean exit = false;  
        while (!exit) {  
            System.out.println("ATM menu:");  
            System.out.println("1. Check Balance");  
            System.out.println("2. Deposit money");  
            System.out.println("3. Withdraw Money");  
            System.out.println("4. Exit");  
            System.out.print("Choose an option:");  
            int choice = scanner.nextInt();  
            switch (choice) {  
                case 1:  
                    System.out.printf("Current Bank balance  
is $%.2f\n", balance);  
                    break;  
                case 2:  
                    System.out.print("Enter amount to deposit: $");  
                    double depositAmount = scanner.nextDouble();  
                    balance += depositAmount;  
                    System.out.printf("New balance is $%.2f\n", balance);  
            }  
        }  
    }  
}
```

```
if (deposit Amount > 0) {
    balance += deposit Amount;
    System.out.printf("Deposited: $ %.2f\n", deposit
                      Amount);
}

else {
    System.out.println("invalid deposit amount.");
}

break;

case 3:
    System.out.print("Enter amount to withdraw: $");
    double withdraw Amount = Scanner.next Double();
    if (withdraw Amount > 0 && withdraw Amount <= balance)
    {
        balance -= withdraw Amount;
        System.out.println("insufficient funds.");
    }
    else {
        System.out.println("invalid withdrawal amount.");
    }

break;

Case 4:
exit = true;
System.out.println("Exiting the ATM. Thank you!");
break;

default:
```

```
        System.out.println("invalid option. Please try again");
        break;
    }
}
scanner.close();
}
```

OUTPUT:-

ATM MENU:

1. Check Balance

2. Deposit Money

3. withdraw Money

4. Exit

choose an option(1-4): 1

your current balance is: \$1000.00

choose an option(1-4): 2

Enter amount to deposit: \$200.

choose an option(1-4): 3

Enter amount to withdraw: \$150

choose an option(1-4): 4

Thank you for using the ATM Good bye!