Practical Assignments - 1

Q. First 50 Prime Numbers

```java
public class For50Prime {
    public static void main(String[] args) {
        System.out.println("50 Prime Numbers using For Loop");
        ForPrime();
        System.out.println();
        System.out.println("50 Prime Numbers using While Loop");
        WhilePrime();
        System.out.println();
        System.out.println("50 Prime Numbers using Do-While Loop");
        DoWhilePrime();
    }


    public static void ForPrime() {
        boolean checkPrime = false;
        int count = 1;

        for(int i = 2; count < 51; i++){
            int sqroot = (int)Math.sqrt(i);
            for(int j = 2; j <= sqroot; j++)
            {
                if(i % j == 0)
                {
                    checkPrime = true;
                    break;
                }
            }
            if(!checkPrime){
                System.out.println(count + " = " + i);
                count++;
            }
            else
                checkPrime = false;
        }
    }
    public static void WhilePrime() {
        boolean checkPrime = false;
        int count = 1;
        int i = 2;
```

```
        while(count < 51) {
            int sqroot = (int)Math.sqrt(i);
            int j = 2;
            while(j <= sqroot)
            {
                if(i % j == 0)
                {
                    checkPrime = true;
                    break;
                }
                j++;
            }
            if(!checkPrime){
                System.out.println(count + " = " + i);
                count++;
            }
            else checkPrime = false;

            i++;
        }
    }

    public static void DoWhilePrime() {
        boolean checkPrime = false;
        int count = 1;
        int i = 2;
        do{
            int sqroot = (int)Math.sqrt(i);
            int j = 2;
            while(j <= sqroot) {
                if(i % j == 0)
                {
                    checkPrime = true;
                    break;
                }
                j++;
            }
            if(!checkPrime){
                System.out.println(count + " = " + i);
                count++;
            }
            else checkPrime = false;

            i++;
        }while(count < 51);
    }

}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\For50Prime.java

50 Prime Numbers using For Loop

1 = 2

2 = 3

3 = 5

4 = 7

5 = 11

6 = 13

7 = 17

8 = 19

9 = 23

10 = 29

11 = 31

12 = 37

13 = 41

14 = 43

15 = 47

16 = 53

17 = 59

18 = 61

19 = 67

20 = 71

21 = 73

22 = 79

23 = 83

24 = 89

25 = 97

26 = 101

27 = 103

28 = 107

29 = 109

30 = 113

31 = 127

32 = 131

33 = 137

34 = 139

35 = 149

36 = 151

37 = 157

38 = 163

39 = 167

40 = 173

41 = 179

42 = 181

43 = 191

44 = 193

45 = 197

46 = 199

47 = 211

48 = 223

49 = 227

50 = 229

50 Prime Numbers using While Loop

1 = 2

2 = 3

3 = 5

4 = 7

5 = 11

6 = 13

7 = 17

8 = 19

9 = 23

10 = 29

11 = 31

12 = 37

13 = 41

14 = 43

15 = 47

16 = 53

17 = 59

18 = 61

19 = 67

20 = 71

21 = 73

22 = 79

23 = 83

24 = 89

25 = 97

26 = 101

27 = 103

28 = 107

29 = 109

30 = 113

31 = 127

32 = 131

33 = 137

34 = 139

35 = 149

36 = 151

37 = 157

38 = 163

39 = 167

40 = 173

41 = 179

42 = 181

43 = 191

44 = 193

45 = 197

46 = 199

47 = 211

48 = 223

49 = 227

50 = 229

50 Prime Numbers using Do-While Loop

1 = 2

2 = 3

3 = 5

4 = 7

5 = 11

6 = 13

7 = 17

8 = 19

9 = 23

10 = 29

11 = 31

12 = 37

13 = 41

14 = 43

15 = 47

16 = 53

17 = 59

18 = 61

19 = 67

20 = 71

21 = 73

22 = 79

23 = 83

24 = 89

25 = 97

26 = 101

27 = 103

28 = 107

29 = 109

30 = 113

31 = 127

32 = 131

33 = 137

34 = 139

35 = 149

36 = 151

37 = 157

38 = 163

39 = 167

40 = 173

41 = 179

42 = 181

43 = 191

44 = 193

45 = 197

46 = 199

47 = 211

48 = 223

49 = 227

50 = 229

Q. Multiply and Display Product

```java
public class Product {
    public static void main(String args[]){
        int i = 0;
        double total = 1;
        while(i < args.length){
            total *= Double.parseDouble(args[i]);
            i++;
        }
        System.out.println("Product : " + total);
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\Product.java 4.5 3.2

Product : 14.4

Q. Area of circle

```java
public class AreaOfCircle {
    public static void main(String[] args)
    throws java.io.IOException{
        double pi = 3.14159;
        System.out.print("Enter The Radius : ");
        double r = (double) System.in.read() - 48;
        System.out.println("Area Of Circle : " + pi*Math.pow(r,2));
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\AreaOfCircle.java

Enter The Radius : 5

Area Of Circle : 78.53975

Q. Display Milliseconds between current date and midnight.

```
import java.util.Calendar;
public class Milliseconds {
    final static byte HOURS = 24;
    final static byte MINUTE = 60;
    final static byte SECONDS = 60;
    final static short MILLISECONDS = 1000;
    public static void main(String[] args) {

        Calendar date = Calendar.getInstance();
        int currentHour = date.get(Calendar.HOUR_OF_DAY);
        int currentMinute = date.get(Calendar.MINUTE);
        int currentSecond = date.get(Calendar.SECOND);
        int currentMillisecond = date.get(Calendar.MILLISECOND);
        System.out.println("Current Time : " + currentHour + ":" + currentMinu
te + ":" + currentSecond + ":" + currentMillisecond);

        long tillMidnightMilliseconds = ( (HOURS - currentHour - 1) * MINUTE *
 SECONDS * MILLISECONDS ) + ((MINUTE - currentMinute ) * SECONDS * MILLISECOND
S) + ((SECONDS - currentSecond ) * MILLISECONDS) + (MILLISECONDS - currentMill
isecond);
        System.out.println("Milliseconds Remain till Midnight: " + tillMidnigh
tMilliseconds);
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\Milliseconds.java

Current Time : 18:20:27:590

Milliseconds Remain till Midnight: 20433410

Q. Square Root

```java
public class SquareRoot {
    public static void main(String args[]){
        System.out.println(Math.sqrt(Double.parseDouble(args[0])));
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\SquareRoot.java 5

2.23606797749979

Q. Display Numbers between 17 to 100 which evenly divisible by 17

```java
public class Print17 {
    public static void main(String[] args){
        int i = 1;
        int magicNumber = 17;

        while((magicNumber*i) <= 100){
            System.out.print((magicNumber*i) + " ");
            i++;
        }
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\Print17.java

17 34 51 68 85

Q. Possible Factors

```java
public class PosibleFactors {
    public static void main(String args[]){
        int number = Integer.parseInt(args[0]);
        int i = 1;
        while(i <= (number/2)){
            if( number % i == 0 )
                System.out.print(i + " ");

            i++;
        }
        System.out.print(number);
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\PosibleFactors.java 89

1 89

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\PosibleFactors.java 98

1 2 7 14 49 98

Q. Five Columns

```
public class PosibleFactors {
    public static void main(String args[]){
        int number = Integer.parseInt(args[0]);
        int i = 1;
        while(i <= (number/2)){
            if( number % i == 0 )
                System.out.print(i + " ");

            i++;
        }
        System.out.print(number);
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\FiveColumn.java

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

31 32 33 34 35

36 37 38 39 40

41 42 43 44 45

46 47 48 49 50

51 52 53 54 55

56 57 58 59 60

61 62 63 64 65

66 67 68 69 70

71 72 73 74 75

76 77 78 79 80

81 82 83 84 85

86 87 88 89 90

91 92 93 94 95

96 97 98 99 100

Q. Pass Number as argument and decrement it & when it reaches 0 then sound bell.

```java
public class Bell {
    public static void main(String args[]) {
        int bellCount = Integer.parseInt(args[0]);

        while(bellCount != 0){
            System.out.println(bellCount);
            bellCount--;
        }
        System.out.print("\u0007");
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\Bell.java 7

7

6

5

4

3

2

1

Q. Class Person

```java
import java.util.Scanner;
public class Person {
     private String name;
     private int age;
     private float salary;

     public void set(){
        Scanner get = new Scanner(System.in);
        System.out.print("Enter Name : ");
        name = get.nextLine();
        System.out.print("Enter Age : ");
        age = get.nextInt();
        System.out.print("Enter Salary : ");
        salary = get.nextFloat();
     }

     public void display(){
        System.out.println("Name : " + name);
        System.out.println("Age : " + age);
        System.out.println("Salary : " + salary);
     }

    public static void main(String[] args){
        Person person = new Person();
        person.set();
        person.display();
    }
}
```

Output :

PS D:\MCA\MCA SEM 3\JAVA\Assignment 1> java .\Person.java

Enter Name : Pradip

Enter Age : 22

Enter Salary : 30000

Name : Pradip

Age : 22

Salary : 30000.0