

Name = Babar Zareen

Sap ID = 74760

Lab Task

Question No = 01

PRIME NUMBER CODE:

```
PrimeNumber.java :  
1- import java.util.Scanner;  
2- public class PrimeNumber {  
3-     public static void main(String[] args) { //name Babar Zareen Sap id 74760  
4-         Scanner sc = new Scanner(System.in);  
5-         int n, i;  
6-         boolean isPrime = true;  
7-         System.out.print("Enter number: ");  
8-         n = sc.nextInt();  
9-         if (n <= 1) {  
10-             isPrime = false;  
11-         }  
12-         for (i = 2; i <= n / 2; i++) //name Babar Zareen Sap id 74760  
13-         {  
14-             if (n % i == 0)  
15-             {  
16-                 isPrime = false;  
17-                 break;  
18-             }  
19-         }  
20-         if (isPrime)  
21-             System.out.println("Prime Number");  
22-         else  
23-             System.out.println("Not Prime");  
24-     }  
25- }
```

Question No = 02

LENGTH OF ARRAY CODE:

ArrayLength.java :

```
1 public class ArrayLength
2 {
3
4     public static void main(String[] args)
5     {
6
7         int[] arr = {10, 20, 30, 40, 50};    // name Babar Zareen
8         int length = arr.length;           // Sap Id 74760
9
10        System.out.println("Length = " + length);
11    }
12 }
```

Question No = 03

PALINDROME NUMBER CODE:

Palindrome.java :

```
1 import java.util.Scanner;      // Name Babar Zareen sap ID 74760
2
3 public class Palindrome {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int n, rev = 0, temp, digit;
7         System.out.print("Enter number: ");
8         n = sc.nextInt();
9
10        temp = n;                      // Name Babar Zareen
11        while (n > 0) {                // sap ID 74760
12            digit = n % 10;
13            rev = rev * 10 + digit;
14            n = n / 10;
15        }
16
17        if (temp == rev)
18            System.out.println("Palindrome");
19        else
20            System.out.println("Not Palindrome");
21    }
22 }
```

Question No = 04

FACTORIAL USING FUNCTION CODE:

```
Factorial.java :  
1 import java.util.Scanner;           // Name Babar Zareen  sap ID 74760  
2  
3 public class Factorial {  
4  
5     static int factorial(int n) {  
6         int fact = 1;  
7  
8         for (int i = 1; i <= n; i++) {    // Name Babar Zareen  
9             fact = fact * i;            // sap ID 74760  
10        }  
11    }  
12    return fact;  
13 }  
14  
15 public static void main(String[] args) {  
16  
17     Scanner sc = new Scanner(System.in);  
18  
19     System.out.print("Enter number: ");  
20     int num = sc.nextInt();  
21  
22     System.out.println("Factorial = " + factorial(num));  
23 }  
24 }
```

Question No = 05

SWAPPING NUMBERS CODE:

- (a) Using 2 Variables:

```
SwapTwo.java :  
1 public class SwapTwo { //Name Babar Zareen Sap ID 74760  
2  
3 public static void main(String[] args) {  
4  
5     int a = 5, b = 10;  
6  
7     a = a + b; //Name Babar Zareen  
8     b = a - b; //Sap ID 74760  
9     a = a - b;  
10  
11    System.out.println("a = " + a);  
12    System.out.println("b = " + b);  
13 }  
14 }
```

Question No = 05

SWAPPING NUMBERS CODE:

(b) Using 3 Variables

```
SwapThree.java :  
1 public class SwapThree  
2 {  
3  
4     public static void main(String[] args)  
5     {  
6  
7         int a = 5, b = 10, temp;  
8  
9         temp = a; // Name Babar Zareen  
10        a = b; // sap ID 74760  
11        b = temp;  
12  
13        System.out.println("a = " + a);  
14        System.out.println("b = " + b);  
15    }  
16 }
```

Question No = 06

PATTERN (Nested Loop) CODE:

```
*  
**  
***  
****  
*****
```

```
Pattern.java :  
1 public class Pattern          // Name Babar zareen sap ID 74760  
2 {  
3  
4     public static void main(String[] args)  
5     {  
6  
7         for (int i = 1; i <= 5; i++)  
8         {  
9             for (int j = 1; j <= i; j++)  
10            {  
11                System.out.print("*");  
12            }  
13            System.out.println();  
14        }  
15    }  
16 }  
17 }
```

Question No = 07

LIBRARY MANAGEMENT SYSTEM CODE:

2 CLASS : BOOK & STUDENT:

```
Library.java ::  
1- import java.util.*;      //Name Babar Zareen sap ID 74760  
2  
3- class Book {  
4-     int id;  
5-     String name;  
6-     boolean issued = false;  
7- }  
8- class Student {      //Name Babar Zareen|  
9-     int id;          //sap ID 74760  
10-    String name;  
11- }  
12- public class Library {  
13-     public static void main(String[] args) {  
14-  
15-         Scanner sc = new Scanner(System.in); //Name Babar Zareen sap ID 74760  
16-  
17-         Book b = new Book();  
18-         Student s = new Student();  
19-  
20-         System.out.print("Enter Book ID: ");  
21-         b.id = sc.nextInt();  
22-         sc.nextLine();  
23-         System.out.print("Enter Book Name: ");  
24-         b.name = sc.nextLine();  
  
25-  
26-         System.out.print("Enter Student ID: "); //Name Babar Zareen  
27-         s.id = sc.nextInt();                      // sap ID 74760  
28-         sc.nextLine();  
29-         System.out.print("Enter Student Name: ");  
30-         s.name = sc.nextLine();  
31-  
32-         b.issued = true;  
33-         System.out.println("\nBook Issued Successfully!");  
34-         System.out.println("Student: " + s.name);  
35-         System.out.println("Book: " + b.name);  
36-     }  
37- }
```

