

Advanced Programming Lab 1

1. Write a simple program that prints your name and ID

Answer:

```
public class task1 {  
    public static void main(String[] args){  
        System.out.println ("My name is : Aporna Bhounick");  
        System.out.println ("ID : 22234103264");  
    }  
}
```

2. Create a basic calculator for addition, subtraction, multiplication, and division.

Answer

```
import java.util.Scanner;  
import static java.lang.System.*;  
public class task2 {  
    public static void main(String[] args){  
        int add, sub, mul, div;  
        int a = 6, b= 4;  
        Scanner input = new Scanner (in);  
        System.out.print("Which function are you looking for: ");  
        int fun = input.nextInt();  
        if (fun == 1) {  
            add = a + b;  
            System.out.println(add);  
        }  
        else if (fun == 2)  
        {  
            sub = a-b;  
            System.out.println(sub);  
        }  
        else if (fun == 3)  
        {  
            mul = a*b;  
            System.out.println(mul);  
        }  
        else if (fun == 4)  
        {  
            div = a/b;  
            System.out.println(div);  
        }  
        else  
        {  
            System.out.println("No function available");  
        }  
    }  
}
```

3. Create a program that finds the maximum and minimum values in an array of

Integers.

Answer: `import java.util.Scanner;`

```
public class task3 {  
    public static void main(String[] args) {  
        Scanner input = new Scanner(System.in);  
        System.out.print("Enter the array size: ");  
        int n = input.nextInt();  
        int[] arr = new int[10];  
        int max = 0;  
        int min = 1000;  
        System.out.println("Enter the Array elements : ");  
        for (int i = 0; i < n; i++) {  
            arr[i] = input.nextInt();  
            if (arr[i] > max) {  
                max = arr[i];  
            }  
            if (arr[i] < min) {  
                min = arr[i];  
            }  
        }  
        System.out.println("The maximum number : " + max);  
        System.out.println("The minimum number : " + min);  
    }  
}
```

4. Write a program that can print a "Chessboard" like below:

```
1 0 1 0 1 0 1 0  
0 1 0 1 0 1 0 1  
1 0 1 0 1 0 1 0  
0 1 0 1 0 1 0 1  
1 0 1 0 1 0 1 0  
0 1 0 1 0 1 0 1  
1 0 1 0 1 0 1 0  
0 1 0 1 0 1 0 1
```

Here,

1 represents black squares

0 represents white squares

Answer;

```
public class task4 {  
    public static void main(String[] args) {  
        int row = 8, column = 8;  
        int twod[][] = new int[row][column];  
        for (int i = 0; i < row; i++) {  
            for (int j = 0; j < column; j++)  
            {  
                if ((i + j) % 2 == 0) {  
                    System.out.print("1 ");  
                }  
            }  
        }  
    }  
}
```

```

        } else {
            System.out.print("0 ");
        }
    }
    System.out.println();
}
}
}

```

5. Create a program that finds the maximum and minimum values in an array of integers.

Answer;

```

import java.util.Scanner;
public class task5 {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Enter the array size: ");
        int n = input.nextInt();
        int[] arr = new int[10];
        int sum = 0;
        System.out.println("Enter the Array elements : ");
        for (int i = 0; i < n; i++) {
            arr[i] = input.nextInt();
            sum = sum + arr[i];
        }
        System.out.println("The Sum : " + sum);
    }
}

```