

Level 2 Practice Programs

1. Create a program to print odd and even numbers between 1 to the number entered by the user.

```
import java.util.Scanner;
public class OnE{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring Variables
        int n;
        System.out.print("Enter a number : ");
        n = input.nextInt();

        //Using for loop
        for(int i = 1; i <= n; i++){
            if(i%2 == 0){
                System.out.println(i+ " is an even number.");
            }else{
                System.out.println(i+ " is an odd number.");
            }
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac OnE.java
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java OnE
```

```
Enter a number : 9
```

```
1 is an odd number.
```

```
2 is an even number.
```

```
3 is an odd number.
```

```
4 is an even number.
```

```
5 is an odd number.
```

```
6 is an even number.
```

```
7 is an odd number.
```

```
8 is an even number.
```

```
9 is an odd number.
```

2. Create a program to find the bonus of employees based on their years of service.

```
import java.util.Scanner;
public class Bonus{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring Variables
        double salary, year, bonus, new_salary;
        System.out.print("Enter the salary : ");
        salary = input.nextDouble();
        System.out.print("Enter the no. of year serviced : ");
        year = input.nextDouble();

        //Using conditional statements
        if(year > 5){
            bonus = (salary * 0.05);
            new_salary = salary + bonus;
            System.out.println("Salary with bonus : " +new_salary);
        }else{
            System.out.println("Since your service is less than 5 years, your salary remains respective : " +salary);
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac Bonus.java
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java Bonus
```

```
Enter the salary : 25000
```

```
Enter the no. of year serviced : 6
```

```
Salary with bonus : 26250.0
```

3. Create a program to find the multiplication table of a number entered by the user from 6 to 9.

```

import java.util.Scanner;
public class MulTable{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variables
        int n,m;
        System.out.print("Enter a number from 6 to 9 : ");
        n = input.nextInt();

        //Using Loops
        if(n >= 6 && n <= 9){
            for (int i = 1; i < 11; i++){
                m=n*i;
                System.out.println(n+ " x " +i+ " = " +m);
            }
        }else{
            System.out.println("You haven't entered a number from 6 to 9");
        }
    }
}

```

```

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac MulTable.java

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java MulTable
Enter a number from 6 to 9 : 7
7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
7 x 10 = 70

```

4. Write a program FizzBuzz, take a number as user input, and if it is a positive integer loop from 0 to the number and print the number, but for multiples of 3 print "Fizz" instead of the number, for multiples of 5 print "Buzz", and for multiples of both print "FizzBuzz".

```
import java.util.Scanner;
public class FizzBuzz{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variable
        int n;
        System.out.print("Enter a number : ");
        n = input.nextInt();

        //Using loops
        for (int i = 1; i < n+1; i++){
            if(i%3==0 && i%5==0){
                System.out.println("FizzBuzz");
                continue;
            }
            if(i%3 == 0){
                System.out.println("Fizz");
                continue;
            }
            if(i%5 == 0){
                System.out.println("Buzz");
                continue;
            }
            else{
                System.out.println(i);
            }
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac FizzBuzz.java

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java FizzBuzz
Enter a number : 20
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
```

5. Rewrite the program 5 FizzBuzz using while loop.

```
import java.util.Scanner;
public class FizzBuzz2{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variable
        int n;
        System.out.print("Enter a number : ");
        n = input.nextInt();

        int i = 1;

        //Using while loop
        while(i <= n){
            if(i%3==0 && i%5==0){
                System.out.println("FizzBuzz");
                continue;
            }
            if(i%3 == 0){
                System.out.println("Fizz");
                continue;
            }
            if(i%5 == 0){
                System.out.println("Buzz");
                continue;
            }
            else{
                System.out.println(i);
            }
            i++;
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac FizzBuzz.java

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java FizzBuzz
Enter a number : 20
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
```

6. Create a program to find the youngest friends among 3 Amar, Akbar, and Anthony based on their ages and the tallest among the friends based on their heights.

```

import java.util.Scanner;
public class Young{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variables and taking user input
        int age1,age2,age3,h1,h2,h3;
        System.out.print("Enter the age of Amar : ");
        age1 = input.nextInt();
        System.out.print("Enter the height of Amar : ");
        h1 = input.nextInt();
        System.out.print("Enter the age of Akbar : ");
        age2 = input.nextInt();
        System.out.print("Enter the height of Akbar : ");
        h2 = input.nextInt();
        System.out.print("Enter the age of Anthony : ");
        age3 = input.nextInt();
        System.out.print("Enter the height of Anthony : ");
        h3 = input.nextInt();

        //Using conditional statements
        if(age1 < age2 && age1 < age3){
            System.out.println("Amar is the youngest.");
        }
        else if(age2 < age1 && age2 < age3){
            System.out.println("Akbar is the youngest.");
        }
        else{
            System.out.println("Anthony is the youngest.");
        }

        if(h1 > h2 && h1 > h3){
            System.out.println("Amar is the tallest.");
        }
        else if(h2 > h1 && h2 > h3){
            System.out.println("Akbar is the tallest.");
        }
        else{
            System.out.println("Anthony is the tallest.");
        }
    }
}

```



```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac Young.java

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java Young
Enter the age of Amar : 19
Enter the height of Amar : 156
Enter the age of Akbar : 20
Enter the height of Akbar : 160
Enter the age of Anthony : 17
Enter the height of Anthony : 152
Anthony is the youngest.
Akbar is the tallest.
```

7. Create a program to find the factors of a number taken as user input.

```
import java.util.Scanner;
public class Factors{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variables
        int n;
        System.out.print("Enter a number : ");
        n = input.nextInt();

        //Using for loop
        for (int i = 1; i <= n; i++){
            if( n % i == 0){
                System.out.println(i);
            }
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac Factors.java

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java Factors
Enter a number : 12
1
2
3
4
6
12
```

8. Create a program to print the greatest factor of a number beside itself using a loop.

```
import java.util.Scanner;
public class GreatestFactors{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variables
        int n,gf;
        System.out.print("Enter a number : ");
        n = input.nextInt();

        //Using for loop
        for(int i = n-1; i > 1; i--){
            if(n%i == 0){
                gf = i;
                System.out.println("Greatest Factor : " +gf);
                break;
            }
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac GreatestFactors.java

C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java GreatestFactors
Enter a number : 16
Greatest Factor : 8
```

9. Create a program to find the power of a number.

```
import java.util.Scanner;
public class Power{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variables
        int n,power,result=1;
        System.out.print("Enter a number : ");
        n = input.nextInt();
        System.out.print("Enter the power : ");
        power = input.nextInt();

        //Using for loop
        for(int i = 1; i<=power; i++){
            result = result*n;
        }
        System.out.println("The result is : " +result);
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac Power.java
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java Power
```

```
Enter a number : 5
```

```
Enter the power : 3
```

```
The result is : 125
```

10. Create a program to find all the multiple of a number taken as user input below 100.

```
import java.util.Scanner;
public class Multiple{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        //Declaring variable
        int n;
        System.out.print("Enter a number : ");
        n = input.nextInt();

        //Using for loop
        for(int i = 100; i >= 1; i--){
            if(i%n == 0){
                System.out.println(i);
            }
        }
    }
}
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>javac Multiple.java
```

```
C:\Users\Shounak Roy\Desktop\JAVA\WEEK 3\LEVEL 2>java Multiple
```

```
Enter a number : 5
```

```
100
```

```
95
```

```
90
```

```
85
```

```
80
```

```
75
```

```
70
```

```
65
```

```
60
```

```
55
```

```
50
```

```
45
```

```
40
```

```
35
```

```
30
```

```
25
```

```
20
```

```
15
```

```
10
```

```
5
```