

Java Concept 26

Why Varargs

- When number of **actual arguments** are **not** decided to pass into functions

Code **Without** Varargs

```
1 public class JavaConcept
2 {
3     static int multiply(int a,int b){return a*b;}
4     static int multiply(int a,int b,int c){return a*b*c;}
5     static int multiply(int a,int b,int c,int d){return a*b*c*d;}
6     public static void main(String args[])
7     {
8         multiply(1,2);    // Passing two actual arguments
9         multiply(1,2,3);  // Passing three actual arguments
10        multiply(1,2,3,4); // Passing four actual arguments
11    }
12 }
```

How to Use it

Syntax

```
1 public static void fun(int ... a)
2 {
3     // method body
4 }
```

- Add three dots (...) before **formal argument** (a)
- Here **formal argument** a is int **array**

Code without Varargs

```
1 public class JavaConcept
2 {
3     static int multiply(int a,int b){return a*b;}
4     static int multiply(int a,int b,int c){return a*b*c;}
5     static int multiply(int a,int b,int c,int d){return a*b*c*d;}
6     public static void main(String args[])
7     {
8         multiply(1,2);    // Passing two actual arguments
9         multiply(1,2,3);  // Passing three actual arguments
10        multiply(1,2,3,4); // Passing four actual arguments
11    }
12 }
```

Code with Varargs

```
1 public class JavaConcept
2 {
3     static int multiply(int ...a){//method body}
4     public static void main(String args[])
5     {
6         multiply(1,2);
7         multiply(1,2,3);
8         multiply(1,2,3,4);
9     }
10 }
```

Concept 26

- There can be only **one variable argument** in a method.
- Can have **one or More** than **one single length** argument with **one Varargs**

```
1 // Taking only one varargs // No Error
2 public class JavaConcept
3 {
4     static void multiply(int ...a){
5         int mult = 1;
6         for(int i=0;i<a.length;i++)
7         {
8             mult = mult*a[i];
9         }
10        System.out.println("Multiplication "
11                             + "result : "+mult);
12    }
13    public static void main(String args[])
14    {
15        multiply(1,2);
16        multiply(1,2,3);
17        multiply(1,2,3,4);
18    }
19 }
```

run:
Multiplication result : 2
Multiplication result : 6
Multiplication result : 24

```
1 // More than one varargs // Error
2 public class JavaConcept
3 {
4
5     static void multiply_sum(int ...a,int ...b)
6     {
7
8     }
9
10    public static void main(String args[])
11    {
12        multiply_sum(1,2,3);
13        multiply_sum(1,2,3,3,4,6);
14        multiply_sum(1,2,3,4,5,6,7,8,9);
15    }
16 }
```

Error

```

1 //One varargs and two single
2 //length argument // No Error
3 public class JavaConcept
4 {
5     static void multiply_sum(int b,int c,int ...a)
6     {
7         System.out.println("Sum of numbers : "+(b+c));
8         int mult = 1;
9         for(int i:a)
10        {
11            mult = mult*i;
12        }
13        System.out.println("Multiplication of numbers : "+(mult));
14    }
15
16    public static void main(String args[])
17    {
18        multiply_sum(1,2,3);
19        multiply_sum(1,2,3,3,4,6);
20        multiply_sum(1,2,3,4,5,6,7,8,9);
21    }
22 }

```

run:

```

Sum of numbers : 3
Multiplication of numbers : 3
Sum of numbers : 3
Multiplication of numbers : 216
Sum of numbers : 3
Multiplication of numbers : 181440

```