

```

package arrayfirst;
import javax.swing.JOptionPane;
public class arrayfirst
{
    public static void main(String[] args)
    {
        int[] num=new int[10] ;
        int i,sum=0;
        String temp;
        for(i=0;i<=9;++i)
        {
            temp =JOptionPane.showInputDialog(null,
                "Enter the number","Input
                Data",JOptionPane.QUESTION_MESSAGE);
            num[i] = Integer.parseInt(temp);
        }//for loop

        System.out.println("Numbers were read in:");
        for(i=0;i<=9;++i)
        {
            System.out.println(num[i]);
        }

        for(i=0;i<=9;++i)
        {
            sum=sum+num[i];
        }

        System.out.println("sum= "+sum);
        System.out.println("average = "+sum/10);
        System.exit(0);
    }
}

```

ARRAY INTRO:

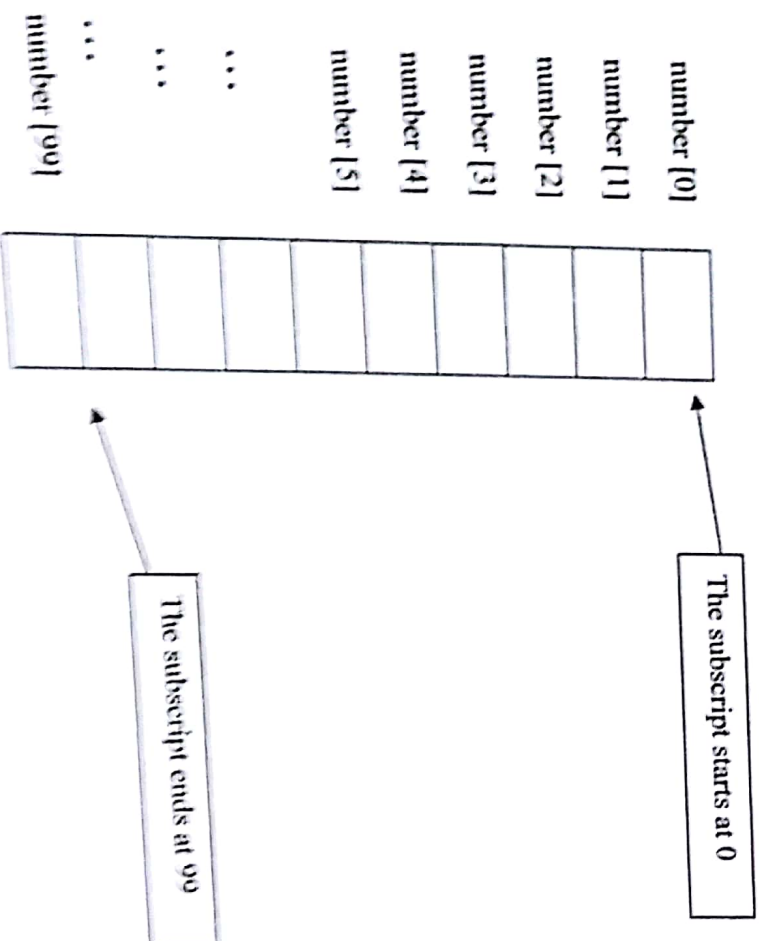
An array is a way to store multiple variables of the same type in consecutive memory locations. If you wanted to store 3 integers, you could use the following declaration:

```
int num1,num2,num3;
```

But what if you wanted to store 100 integers? It would not be practical to have 100 variable names. Therefore, you will define an array of integers to be 100 big. The following statement will define such an array:

```
int [] number=new int [100];
```

This would define an array with 100 locations:



```
package array;
import javax.swing.JOptionPane;
//simple array program to store 5 integers
public class array
```

```
{
    public static void main(String[] args)
    {
        String svalue;
        int [] number = new int [5];
        int i;
```

```
//loop to store 5 integers
for (i=0; i<=4; ++i)
```

```
{
    String output = "Enter a Number";

    svalue = JOptionPane.showInputDialog(null,
        output, " ", JOptionPane.QUESTION_MESSAGE);
    number[i] = Integer.parseInt(svalue);
} //i loop
```

```
//loop to print 5 integers
for (i=0; i<=4; ++i)
```

```
{
    System.out.print(number[i]);
} //i loop
System.exit(0);
} // main method
} // class
```

This program has one loop to store 5 integers and one loop to print out what was stored

If the user typed in the numbers, 5,10,15,20,25 They would be stored in the following integer array

number [0]	5
number [1]	10
number [2]	15
number [3]	20
number [4]	25

```

package array2;
import javax.swing.JOptionPane;
//parallel array example
//will store 5 names and 5 grades
public class array2
{
    public static void main(String[] args)
    {
        String svalue;
        String [] name = new String [5];
        int [] grade =new int [5];
        int i;
        //loop to ask for input and store the name and grade
        for (i=0; i<=4; ++i)
        {
            String output= "Enter the Name";
            name[i] =JOptionPane.showInputDialog(null,
            output," ",JOptionPane.QUESTION_MESSAGE);
            output= "Enter the Grade";
            svalue =JOptionPane.showInputDialog(null,
            output," ",JOptionPane.QUESTION_MESSAGE);
            grade[i]=Integer.parseInt(svalue);
        }
        //loop to print the name and the grade
        for (i=0; i<=4; ++i)
        {
            System.out.println(name[i]+" Had a grade of "+grade[i]);
        }
    }
}

```

This program is an example of parallel arrays. If the user entered the information below, the name and the grade are stored in arrays that parallel in memory.

name [0]

George

grade [0]

100

name [1]

Nick

grade [1]

85

name [2]

Dean

grade [2]

90

name [3]

David

grade [3]

99

name [4]

John

grade [4]

75

The output would be:

George Had a grade of 100
 Nick Had a grade of 85
 Dean Had a grade of 90
 David Had a grade of 99
 John Had a grade of 75