

8 JAVA INPUT

Often times it is necessary for the program, to interact with the user – and one of the ways in which this is done, is by getting input from the user.

8.1 IMPORT SCANNER CLASS

To work with user input in Java, we need to import the scanner class, this code precedes the skeleton code and goes right at the top:

```
import java.util.Scanner;
```

8.2 USING SCANNER CLASS

Once the scanner class has been imported, we can make use of it to get user by input first by creating an object of the scanner class :

```
Scanner input = new Scanner(System.in);
```

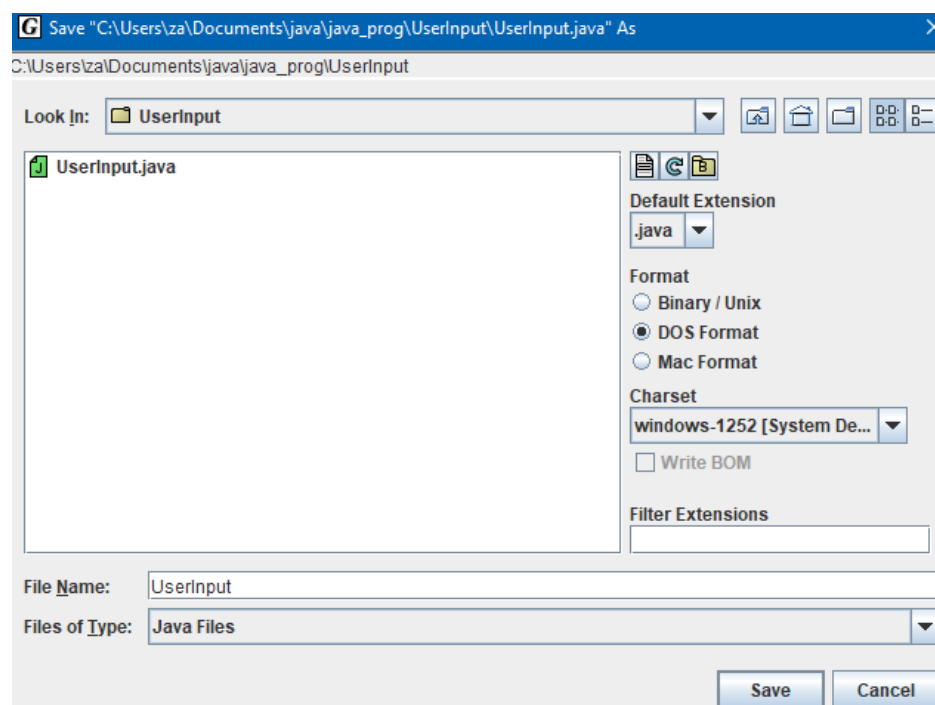
Then declare a variable that will store the input from the user :

```
int number = input.nextInt();
```

8.3 USER INPUT PROGRAM

Open up jGRASP, go to File -> New -> Java

Once a new file java file has been opened, go to File -> Save As. Create a new folder called UserInput, and save your file in that folder as UserInput



First lets us import the scanner class, insert the following code at the top of your program :

```
import java.util.Scanner;
```

Next add in the skeleton :

```
public class UserInput {  
    public static void main(String[] args) {  
    }  
}
```

Run the program to make sure it works.

Create an object of the Scanner Class, called input. You can call it whatever you wish, but in this example it is called input.

```
Scanner input = new Scanner(System.in);
```

Your code should now look like this :

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

Declare three variables, one string, one float and integer:

```
int a;  
float b;  
String s;
```

Prompt the user to enter in a string :

```
System.out.println("Enter a string");
```

Then store what the user enters into the variable s;

```
s = in.nextLine();
```

Then output what the user entered :

```
System.out.println("You entered string " + s);
```

Finally close the input object :

```
input.close();
```

Code should now look like this :

```
import java.util.Scanner;

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

        int a;
        float b;
        String s;

        System.out.println("Enter a string");
        s = input.nextLine();
        System.out.println("You entered string " + s);

        input.close();
    }
}
```

Run and save the program

Now note for integer we use nextInt() and for floating point we use nextFloat()

We will now add in the code the for integer. First prompt the user to enter a integer, then save that input into the variable n, and finally output what the user entered:

```
System.out.println("Enter an integer");
a = in.nextInt();
System.out.println("You entered integer " + a);
```

We will do the same thing for floating point. First prompt the user to enter a float, then save the input into the variable b, and finally output what the user entered :

```
System.out.println("Enter a float");
b = input.nextFloat();
System.out.println("You entered float " + b);
```

Full code the user Input Program :

```
import java.util.Scanner;

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

        int a;
        float b;
        String s;

        System.out.println("Enter a string");
        s = input.nextLine();
        System.out.println("You entered string " + s);

        System.out.println("Enter an integer");
        a = input.nextInt();
        System.out.println("You entered integer " + a);

        System.out.println("Enter a float");
        b = input.nextFloat();
        System.out.println("You entered float " + b);

    }
}
```