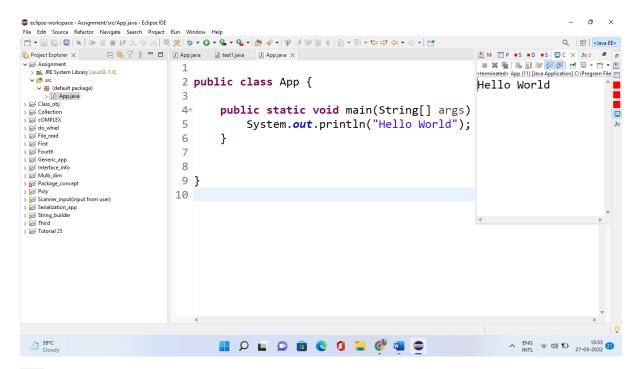
## 1). Create Hello World



2). Create a program that asks the user to enter an integer. If the integer is less than 10, print the message "This number is too small". If the integer is greater than or equal to 10, print "This number is big enough".

```
₽
  eclipse-workspace - Assignment/src/App.java - Eclipse IDE
Q 🔛 <Java EE>
 Pr... X □ □ ② Appjava ② testljava ② Appjava X
□ S ▽ S □ 1 import java.util.Scanner;

      M...
      □ P...
      ■ S...
      ■ D...
      ■ S...
      □ C...
      ∠ Ju J...
      ● Ø

      ■ X
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ●
      ♥
      ♠

      <terminated> App (11) [Java Application] CAProgram Files\Uava\rightarrow
      CAProgram Files\Uava\rightarrow
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      ♠
      <td
  → Assignment 2

> MRE System Lib

> For System Lib

> App,javz

> App,javz

> Class_obj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Enter a number > 10
                                                                             3 public class App {
                                                                                                         public static void main(String[] args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This number is big enough.
                                                                                                                                     Scanner scanner = new Scanner(System.in);
     > 📂 Collection
> 📂 cOMPLEX
                                                                                                                                      System.out.println("Enter a number > 10");
     > ScOMPLEX
> ScOMPLEX
> ScOMPLEY
> ScOMPLE
> S
                                                                             8
                                                                                                                                     int number = scanner.nextInt();
                                                                         11
                                                                                                                                       if(number < 10) {</pre>
                                                                         12
                                                                                                                                                              System.out.println("This number is too small.");
    > ₩ Multi_dim
> ₩ Package_concept
> ₩ Poly
> ₩ Scanner_input(in;
> ₩ Serialization_app
> ₩ String_builder
> ₩ Third
> ₩ Tutorial 25
                                                                         13
                                                                         14
                                                                                                                                       else {
                                                                                                                                                              System.out.println("This number is big enough.");
                                                                        17
                                                                        18
                                                                        19 }
                                                                        20
```

3). Create a program that creates an array of five hard-coded floating-point values, then prints out just the second value.

```
eclipse-workspace - Assignment/src/App.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M... □ P... ■ S... ■ D... ■ S... □ C... × Ju J... ₽ ₽
  ☐ Pr... X ☐ ☐ Appjava ☐ test1java ☐ Appjava ☐ Appjava ☐ test1java ☐ Appjava ☐ test1java ☐ Appjava ☐ Appjava ☐ test1java ☐ tes
                                                                                                                                                                                                                                                                                                                                                                                                                                 ■ 🗶 💸 🗎 🔠 🔛 🖅 💆 💌 💌 💌 💌 😭 v 😭 v 🚉 vterminated> App (11) [Java Application] C:\Program Files\Java\jre1.8:
                                                                                                                                                                                                                                                                                                                                                                                                                                15 2
                                                                                                                        public static void main (String[] args) {
   ▣
                                                                                                                                              double[] values = { 0.11, 15.2, 55.3, 69.3, 8.3 };
                                                                                                                                              System.out.println(values[1]);
                                                                     9
                                                                                                                       }
      First
      Fourth
                                                                10
    > SF Fourth 10
> SF Generic_app 11
> SF Interface_info 12
> SF Package_concept 13
> SF Poly 16
> SF Scanner_input(in) 15
> SF Serialization_app 15
                                                          11
                                                                                                    }
     > 📂 String_builder
       124 Third
    > 👺 Tutorial 25
```

4). Modify the above program so that it uses a for loop to display all the values in the array, all on the same line, each value formatted to two decimal places and followed by a space.

```
File Edit Source Refactor Navigate Search Project Run Window Help
Q P <Java EE>
Pr... X P D App,java A test1,java App,java X

5 7 8 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 2 public class App {

> Assignment b

> M. RE System Lib

> M. Set System Lib

> M. Class obj

Accordance System Syste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eterminated> App (11) [Java Application] C:\Program Files\Java\jre1.8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.11 15.20 55.30 69.30 8.30
                                                                                                                                                                                                public static void main (String[] args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      double[] values = { 0.11, 15.2, 55.3, 69.3, 8.3 };
       > 🔂 Collection
                                                                                                                                                                                                                                 for(int i=0; i < values.length; i++) {
    System.out.printf("%.2f ", values[i]);</pre>
       > 🚧 cOMPLEX
         do whiel
                                                                                                              8
      owhiel
control
                                                                                                         10
                                                                                                                                                                                                }
                                                                                                      11
                                                                                                      12
         Package_concept
                                                                                                                                                                }
    > Brackage_concept
> Poly
> Scanner_input(ing
> Serialization_app
> String_builder
> Third
> Tutorial 25
                                                                                                      14
```

5). A bit trickier, this one. Write an application that creates a two-dimensional array of Strings, with two rows and three columns. Print the value in the second row and third column.

```
eclipse-workspace - Assignment/src/App.java - Eclipse IDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
   File Edit Source Refactor Navigate Search Project Run Window Help
Q B <Java EE>
 Pr... X 📟 🗖 📝 App.java 🔝 test1.java 📝 App.java X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M... □ P... ■ S... ■ D... ■ S... □ C... × Ju J... □
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M... P... S... D... S... Q... A U.J... or with the control of t
                        □$7:
 ✓ Assignment

> M. JRE System Lib

✓ Stree

(default par

> D. Appjava

5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kusum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ▣
       > 📂 Class_obj
                                                                                                                                                                                                                                public static void main(String[] args) {
                                                                                                            6⊝
      > 📂 Collection
> 📂 cOMPLEX
      > GE COMPLEX
> GE do_whiel
> GE file_read
> GE First
> GE Fourth
> GE Generic_app
> Multi_dim
> Multi_
                                                                                                                                                                                                                                                               8
                                                                                                      10
                                                                                                    11
                                                                                                      12
                                                                                                                                                                                                                                                                 System.out.println(texts[1][2]);
         → 🔐 Package_concept
                                                                                                    13
            Poly
Scanner input(in
      > 🔓 Scanner_Input(in)
> 😂 Serialization_app
> 😂 String_builder
> 😂 Third
> 🔂 Tutorial 25
                                                                                                    15
                                                                                                    17
                                                                                                    18
                                                                                                    19
                                                                                                    20
                                                                                                                                                              }
                                                                                                    21
                                                                                                    22
                                                                                                    23
                                                                                                    24
```

6). Create an application that uses two nested for loops to loop through the 2D the defined above print values. and array

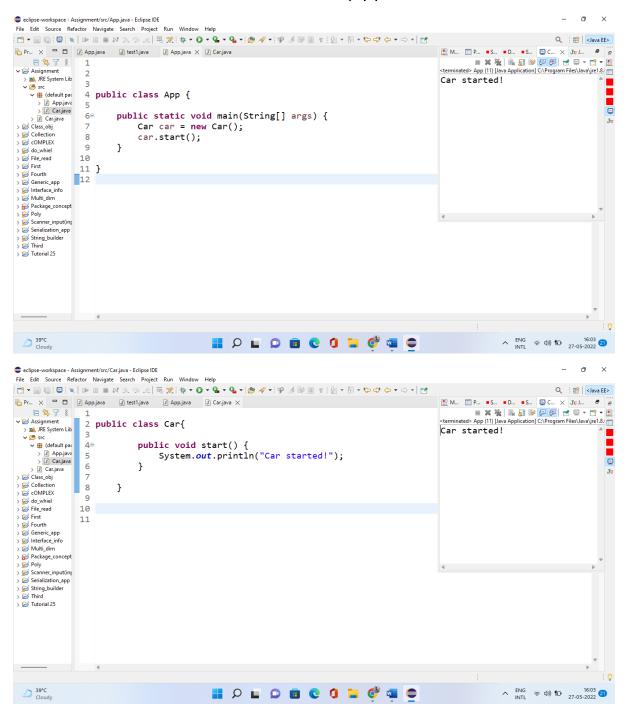
0

```
eclipse-workspace - Assignment/src/App.java - Eclipse IDE
 File Edit Source Refactor Navigate Search Project Run Window Help
Q : 😭 | <Java EE>
M... □ P... ■ S... ■ D... ■ S... □ C... × Ju J... □ ...
                                                                                                                                                                                                                                                                                                                                                   ■ X ¾ 🖟 🔐 🗗 🗗 🗗 🕶 🕶 🕶
                                                                                                                                                                                                                                                                                                                           <terminated> App (11) [Java Application] C:\Program Files\Java\jre1.8.

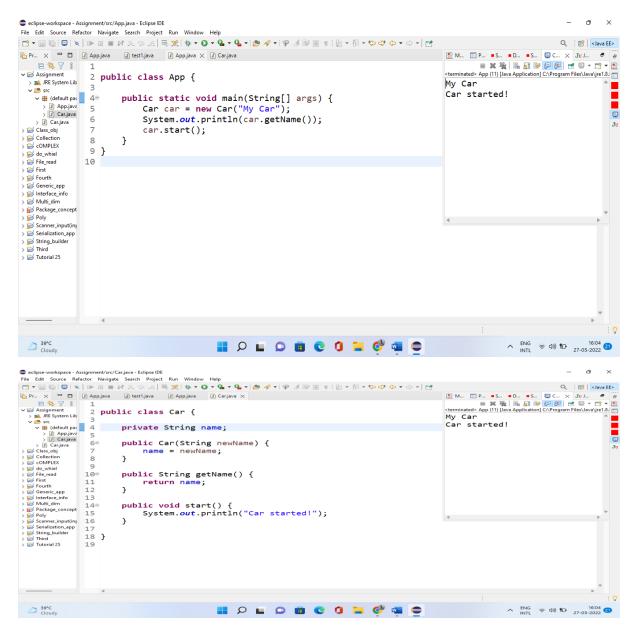
→ I Assignment

                                                 2 public class App {
     > Massignment
Assignment
Assignment
> Massignment
Assignment
Assign
                                                                                                                                                                                                                                                                                                                           Neha Swati Sweta
                                                                                                                                                                                                                                                                                                                           Sidd Manish Kusum
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ▣
  > Class_obj
> Class_obj
> Collection
> COMPLEX
                                                    6⊝
                                                                                                           public static void main(String[] args) {
    do whiel
                                                                                                                          String texts[][] = {
                                                    8
  > Go_whiel
> Go_whiel
> File_read
> First
> Fourth
> Generic_app
> Interface_info
> Multi_dim
                                                                                                                                                         {"Neha", "Swati", "Sweta" },
{"Sidd", "Manish", "Kusum" }
                                                10
                                                11
                                                12
                                                                                                                          for(int row = 0; row < 2; row++) {</pre>
    ₽ Package_concept
                                               13
  > SPACKAGE_concept
> SP Poly
> SP Scanner_input(in)
> SP Scrialization_app
> SP String_builder
> SP Third
> SP Tutorial 25
                                                                                                                                          for(int col = 0; col < 3; col++) {</pre>
                                                14
                                                                                                                                                         System.out.print(texts[row][col]); // pri
                                                                                                                                                          System.out.print(" "); // print space
                                                16
                                                17
                                                18
                                                19
                                                                                                                                          System.out.println(); // print a newline.
                                                20
                                                                                                                         }
                                                21
                                                                                                          }
                                                22
                                                23
                                                                                           }
                                                24
```

7). Next, define a new class in its own file. Call the class Car. Give it a single method called "start". Make the method simply print "Car started!".



8)Modify the above Car class so that it has an instance variable called name of type String. Add a constructor that accepts a string parameter and sets the car's name using this parameter. Add a getName() method that returns the car's name.



9). Write an application that asks the user to enter the number '5' and loops over and over until '5' is entered.

```
eclipse-workspace - Assignment/tre/Appjave - Eclipse IDE

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigate Search Project Run Window Help

File Eait Source Refactor Navigator Search Project Run Window Help

File Eait Source Refactor Navigator Search Project Run Window Help

File Eait Source Refactor Navigator Search
```

10). The above program crashes if a user enters something other than a number. The problem is that we use the nextInt() method of Scanner, assuming blindly that we will get an integer.

```
ō
File Edit Source Refactor Navigate Search Project Run Window Help
Q dava EE>
Pr... X 🖳 🗖 🚺 App.java 🎝 test1.java 🔎 App.java X 📝 Car.java
                                                                                                                                                                                                                                                                                       M... P... ■ S... ■ D... ■ S... □ U... A U..
          □ ♥ ♥ ■ 1 import java.util.Scanner;
     > Assignment
> M JRE System Lib
> Src
- (default pace)
                                                                                                                                                                                                                                                                                         Enter the number 5:
                                             3 public class App {
                                                                                                                                                                                                                                                                                          Enter the number 5:
           > [] App.java
> [] Car.java
> [] Car.java
                                                                                                                                                                                                                                                                                                                                                                                                       public static void main(String[] args) {
                                                                                                                                                                                                                                                                                         Enter the number 5:
                                                                                int value = 0:
  > 📂 Class_obj
   Collection

    8

                                                                             Scanner scanner = new Scanner(System.in);
                                                                                                                                                                                                                                                                                         Got it!
 > COMPLEX
> do_whiel
> File_read
> First
> Fourth
> Generic_app
                                          10
                                                                               while (value != 5) {
                                          11
                                                                                              System.out.println("Enter the number 5: ");
                                          12
                                                                                              if (scanner.hasNextInt()) {
   Interface info
                                          13
   Multi dim
                                                                                                             value = scanner.nextInt();
                                          14
                                                                                              } else {
                                                                                                              scanner.nextLine();
                                          17
   18
                                                                                }
  > 📂 Tutorial 25
                                          19
                                                                                 System.out.println("Got it!");
                                          20
                                          21
                                          22
                                          23
                                          24 }
```

11). Write a program that asks the user to enter an integer. If the user enters '1', print "Got 1". If the user enters '66', print "Got 66". If the user enters something other than these two numbers, print "Got something else".

```
eclipse-workspace - Assignment/src/App.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Q 🔛 <Java EE>
                                                                                                                                                                                                                                                                                                                       🎦 Pr... 🗴 🗖 🔲 App.java 📓 test1.java 🔑 App.java 🗴 📝 Car.java
            ☐ 🥞 🎖 🕴 1 import java.util.Scanner;
                                                                                                                                                                                                                                                                                                                       ■ 🗶 🗞 🔒 🔐 📴 🖅 💌 💌 🕶 🕶 🛣 (cterminated> App (11) [Java Application] C:\Program Files\Java\jre1.8:
Assignment

Assign
                                                                                                                                                                                                                                                                                                                      Enter an integer:
                                                3 public class App {

    ✓ all (default pac
    ✓ App.jave
    ✓ Pop.jave
    ✓ Car.java
    ✓ Car.java
    ✓ Collection
    ✓ Collection
    ✓ Collection
    ✓ Complex
    ✓ do_whiel
                                                                                                                                                                                                                                                                                                                      Got something else.
                                                                         public static void main(String[] args) {
                                                                                        Scanner scanner = new Scanner(System.in);
                                                   8
                                                                                         System.out.println("Enter an integer: ");
                                                   9
   → 📂 do_whie
                                              10
   → 📂 File_read
                                                                                      int value = scanner.nextInt();
   First
                                               11
   Fourth
  Fourth
Generic_app
                                                                                         switch (value) {
                                               13
                                              14
                                                                                                        System.out.println("Got 1");
                                               15
                                                                                                        break;
                                                                                         case 66:
                                              16
   Serialization_app
                                                                                                         System.out.println("Got 66");
   ⇒ 📂 String_builder
⇒ 📂 Third
                                                                                                        break;
                                              19
                                              20
21
                                                                                         default:
                                                                                                         System.out.println("Got something else.");
                                              22
                                                                         }
                                                                                                                                               🔡 🔎 🔲 🖸 📵 🕲 🔰 🥞 🝱 🤩
```

12). A while loop checks its condition before the first iteration of the loop. A do...while loop checks the condition at the end of the loop. This means there's always at least one iteration of the loop.

```
eclipse-workspace - Assignment/src/App.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Q 🔡 | <Java EE>
Mar... ■ Pro... ■ Ser... ■ Dat... ■ Sni... ■ Co...
** Application | C.\Program Files\Java\jre1.8.0_261\binj =
                                                                                     Enter an integer:
                                                                                     Enter an integer:
                     public static void main(String[] args) {
                                                                                     Integer greater than 10 detected!
                              Scanner scanner = new Scanner(System.in);
              9
                              int value = 0;
 > 📂 do_whiel
> 📂 File_read
> ☐ File_read
> ☐ First
> ☐ First
> ☐ Fourth
> ☐ Generic_app
> ☐ Interface_info
> ☐ Multi_dim
> ☐ Poly
> ☐ Poly
> ☐ Senalization_app
> ☐ Sing_builder
> ☐ Third
> ☐ Third
             10
             11
                              do
                                   System.out.println("Enter an integer: ");
             15
                                   value = scanner.nextInt();
              16
                              while(value <= 10);</pre>
             19
                              System.out.println("Integer greater than 10 detected!");
             20
            21 }
                                          🔡 P 🗳 🐧 📵 🐧 👛 💣 👊 🧁
```