**Java Programming**- **Practical File**

**Paper Name: P-VII Java Lab**

**Paper Code: BCA - 252**

***Submitted by - Submitted to -***

**Ayush Pun Dr. Kavita Pabreja**

**02314902020 (Associate Professor)**

***in partial fulfillment for the award of the degree***

***of***

**BACHELOR OF COMPUTER APPLICATION**



**MAHARAJA SURAJMAL INSTITUTE**

**C-4, JANAK PURI,**

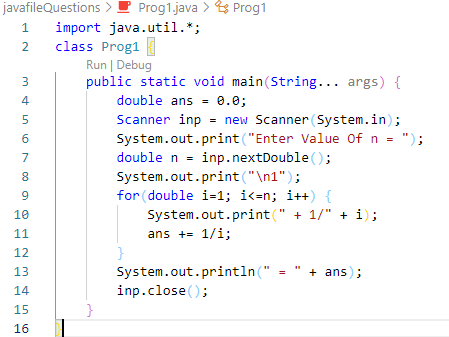
**NEW DELHI - 110058**

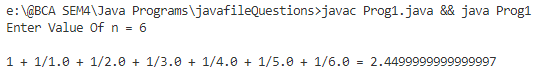
MAY 2022

**Index**

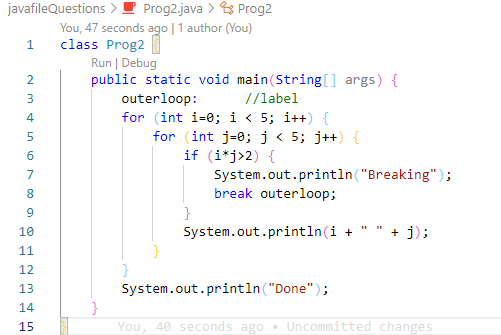
|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Program statement** | **Date of execution** | **Teacher’s Signature** |
|  | Calculate and print: 1+ ½ + 1/3 + ¼+…+ 1/n. Take n as input from user. |  |  |
|  | Demonstrate the effect of nested break. |  |  |
|  | Demonstrate the use of Scanner class to input a number and print its table. Print its factorial also |  |  |
|  | Create a 3 x 3 array. Input all elements and display all. Use functions for input and display. |  |  |
|  | WAP to find volume of sphere, cone and cylinder using method overloading. Take input from user using scanner class. |  |  |
|  | Demonstrate the concept of static variable, static function and static block. |  |  |
|  | Demonstrate the concept of super to access base class data member and method. |  |  |
|  | Demonstrate the concept of multilevel inheritance. Use parameterized constructors and use super to construct object of superclasses. |  |  |
|  | WAP to demonstrate run-time polymorphism/dynamic method dispatch. |  |  |
|  | Demonstrate the concept of aggregation/nested class. |  |  |
|  | Demonstrate the concept of interface for vehicle. |  |  |
|  | Demonstrate the concept of constructors in abstract class. |  |  |
|  | Demonstrate the scenario of multiple inheritance using multiple interfaces. |  |  |
|  | Demonstrate the concept of extending interfaces. |  |  |
|  | WAP to demonstrate Checked or Unchecked exception. |  |  |
|  | WAP to input salary of a person along with his name, if the salary is less than 70,000 then throw an arithmetic exception with a proper message “not eligible for loan”. |  |  |
|  | Spawn 3 child threads. Make use of sleep() method. Let each of the three threads and main thread print appropriate message. |  |  |
|  | Display ID’s of 5 different child threads spawned from main. |  |  |
|  | Demonstrate application of isAlive() or join() method. |  |  |
|  | Spawn 3 child threads with different priorities. Display their names and priorities. |  |  |
|  | Demonstrate the use of synchronization by spawning 3 different threads. |  |  |
|  | Demonstrate inter-thread communication. |  |  |
|  | Take input from keyboard and write into a file using character stream and byte stream. |  |  |
|  | Copy an existing text file into a newly created text file using both types of stream. |  |  |
|  | Write an applet to Display a moving banner. |  |  |
|  | Write an applet that shows the following AWT controls  -> checkbox  -> choice list  -> push button |  |  |
|  | WAP to accept details of employee(name , eno ,mobile no, designation, salary) using AWT controls. |  |  |
|  | Write an applet that implements MouseListener and MouseMotionListener. |  |  |
|  | WAP that accepts 10 names from keyboard and arrange them in dictionary order. |  |  |
|  | Write an applet / swing that demonstrates working of 3 scrollbars (RGB) to change background color. |  |  |
|  | Write a program to implement any one of the 4 layout managers. |  |  |
|  | WAP to connect to any database using JDBC Type 4 driver. |  |  |
|  | WAP to demonstrate use of TCP and UDP methods. |  |  |

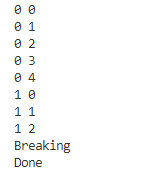
1. Calculate and print: 1+ ½ + 1/3 + ¼+…+ 1/n. Take n as input from user.



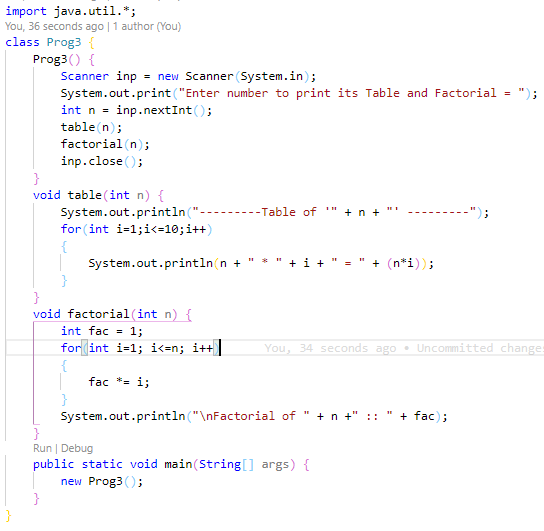
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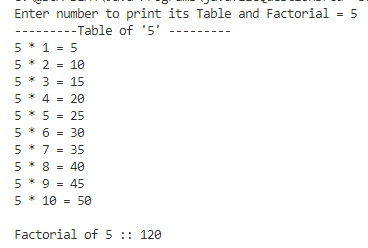
1. Demonstrate the effect of nested break.



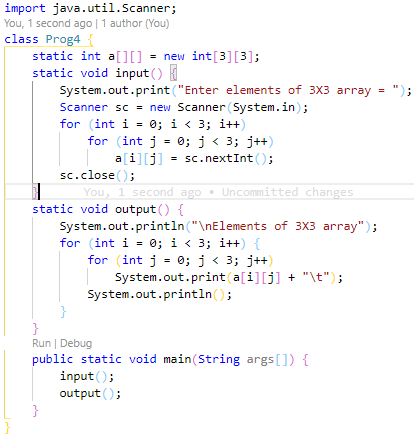
Output:

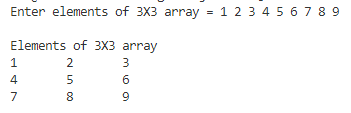
1. Demonstrate the use of Scanner class to input a number and print its table. Print its factorial also



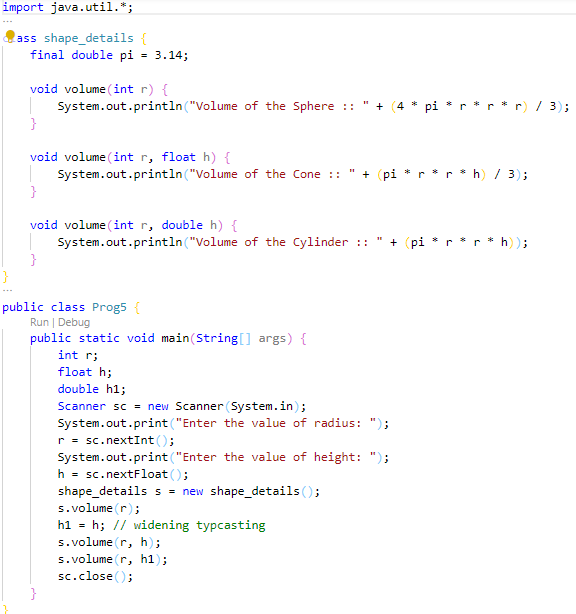
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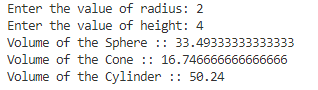
1. Create a 3 x 3 array. Input all elements and display all. Use functions for input and display.

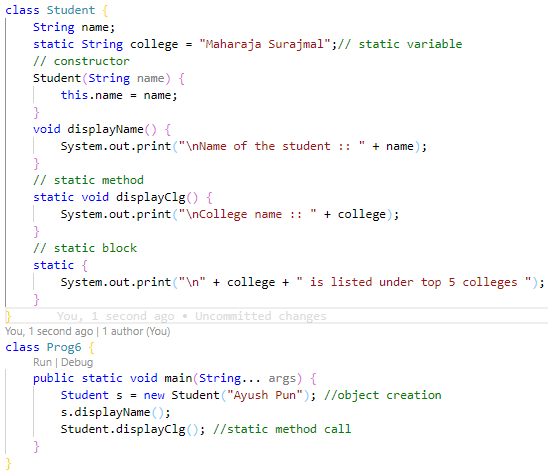


Output:

1. WAP to find volume of sphere, cone and cylinder using method overloading. Take input from user using scanner class.

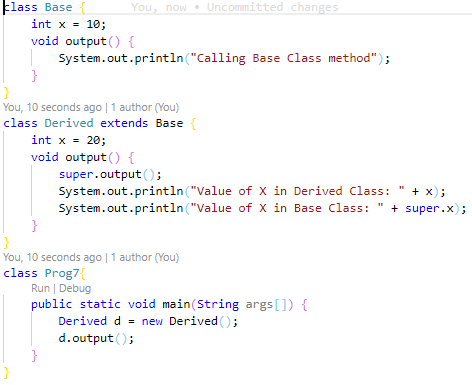


Output:

1. Demonstrate the concept of static variable, static function and static block.

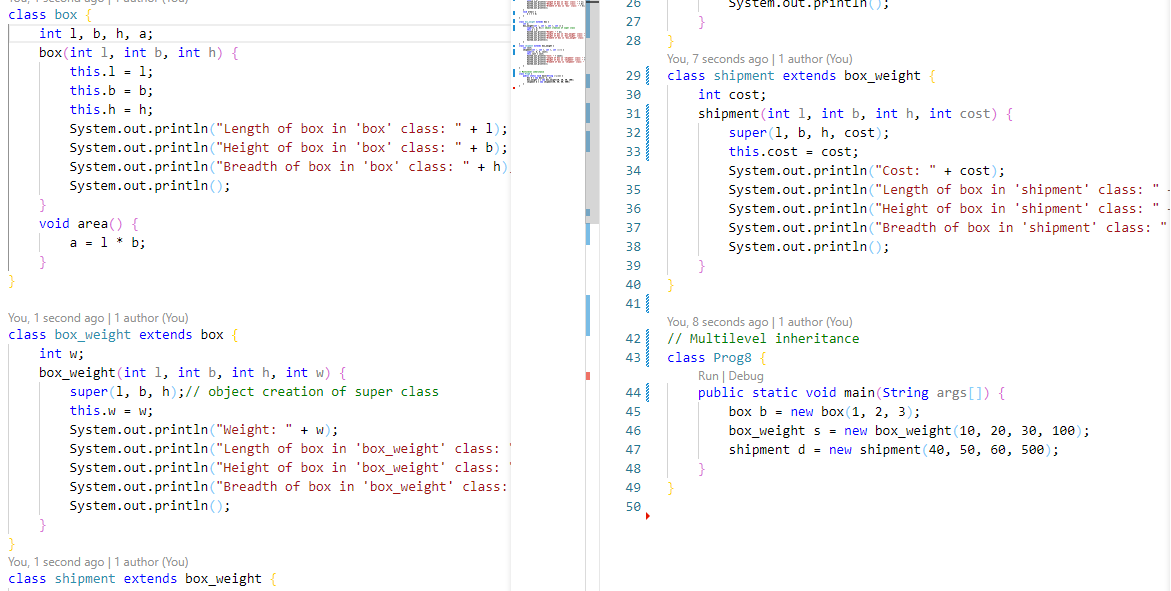
Output:

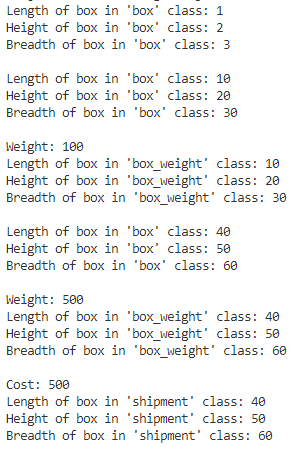
1. Demonstrate the concept of super to access base class data member and method.



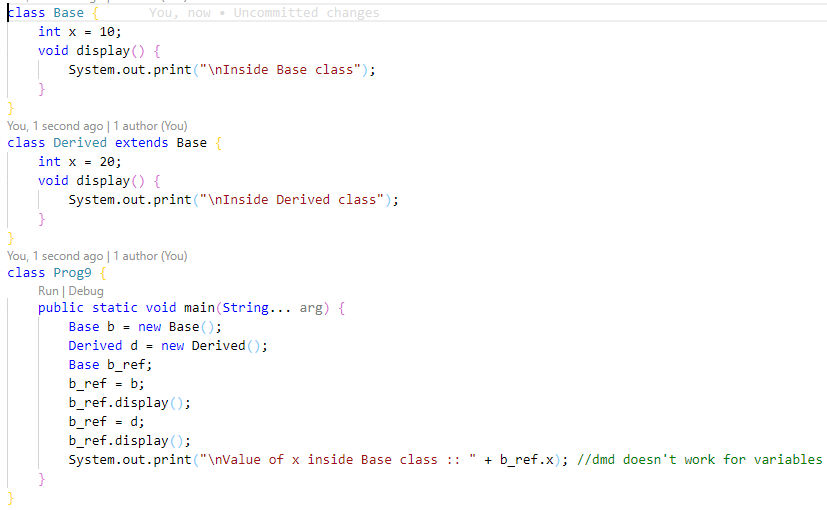
Output:

1. Demonstrate the concept of multilevel inheritance. Use parameterized constructors and use super to construct object of superclasses.



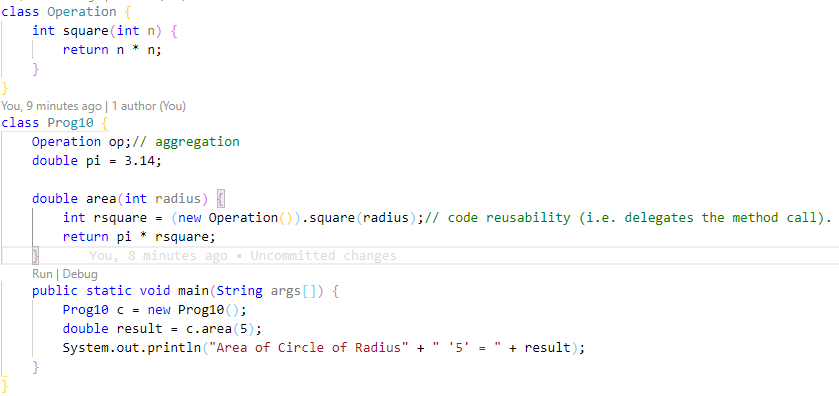
Output:

1. WAP to demonstrate run-time polymorphism/dynamic method dispatch.



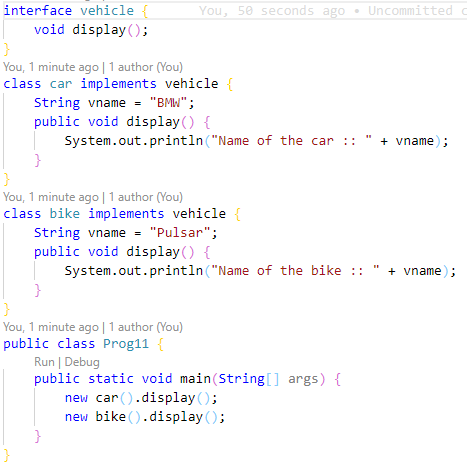
Output:

1. Demonstrate the concept of aggregation/nested class.



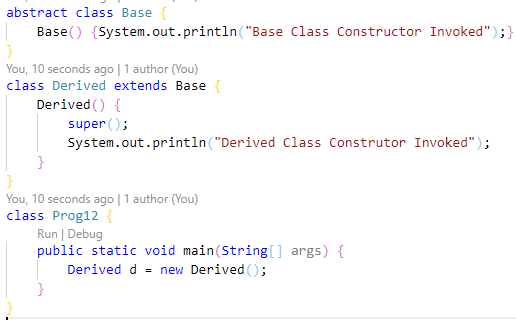
Output:

1. Demonstrate the concept of interface for vehicle.



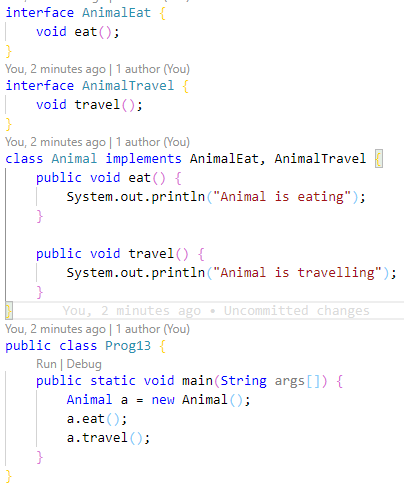
Output:

1. Demonstrate the concept of constructors in abstract class.



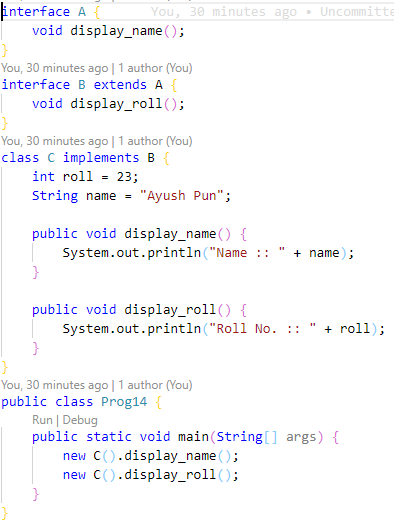
Output:

1. Demonstrate the scenario of multiple inheritance using multiple interfaces.



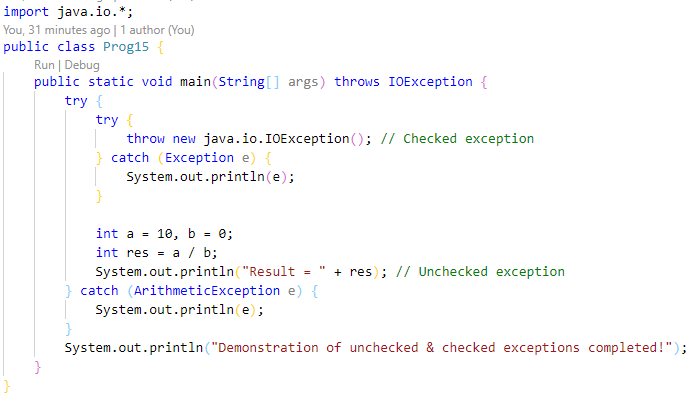
Output:

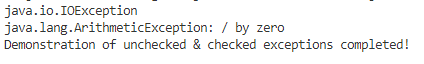
1. Demonstrate the concept of extending interfaces.



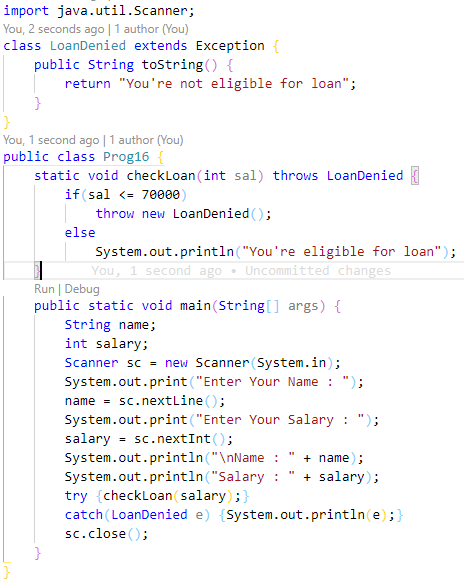
Output:

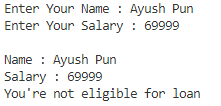
1. WAP to demonstrate Checked or Unchecked exception.



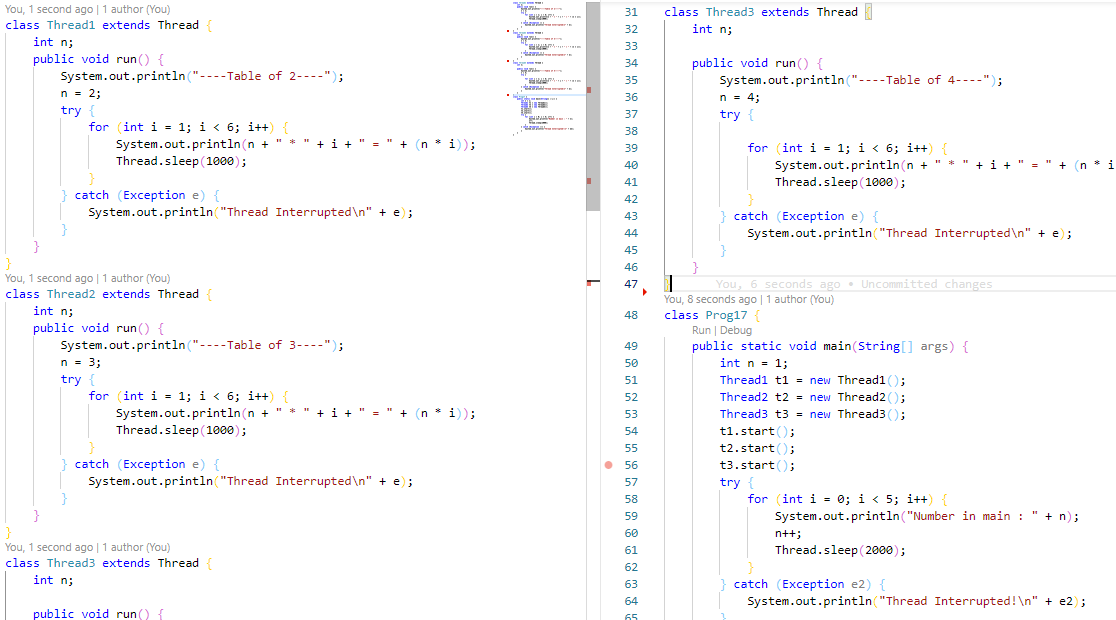
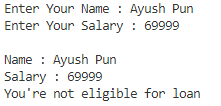
Ourput:

1. WAP to input salary of a person alongwith his name, if the salary is less than 70,000 then throw an arithmetic exception with a proper message “not eligible for loan”.



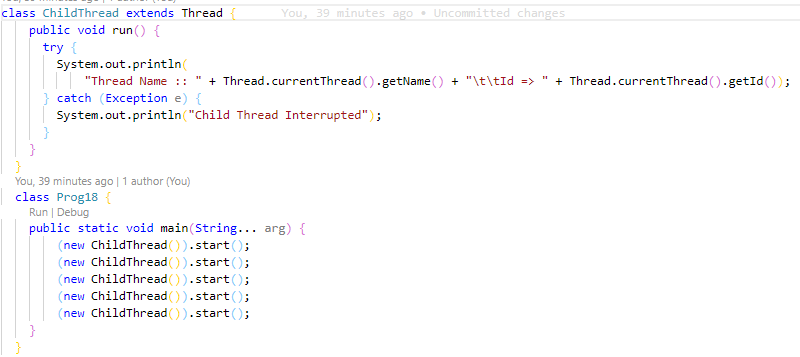
Output:

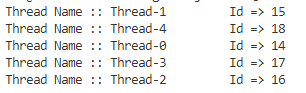
1. Spawn 3 child threads. Make use of sleep() method. Let each of the three threads and main thread print appropriate message.



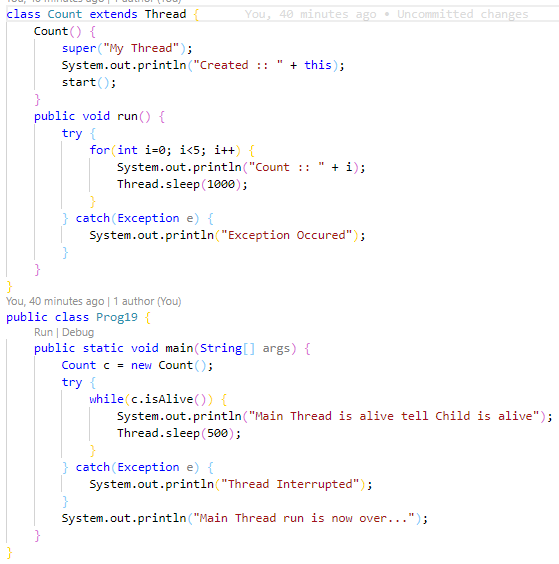
Output:

1. Display ID’s of 5 different child threads spawned from main.

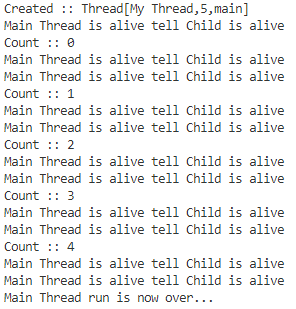


Output:

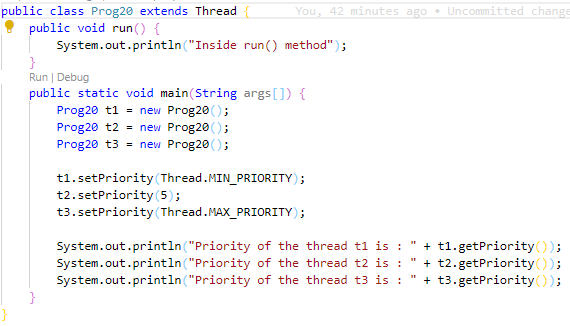
1. Demonstrate application of isAlive() or join() method.



Output:

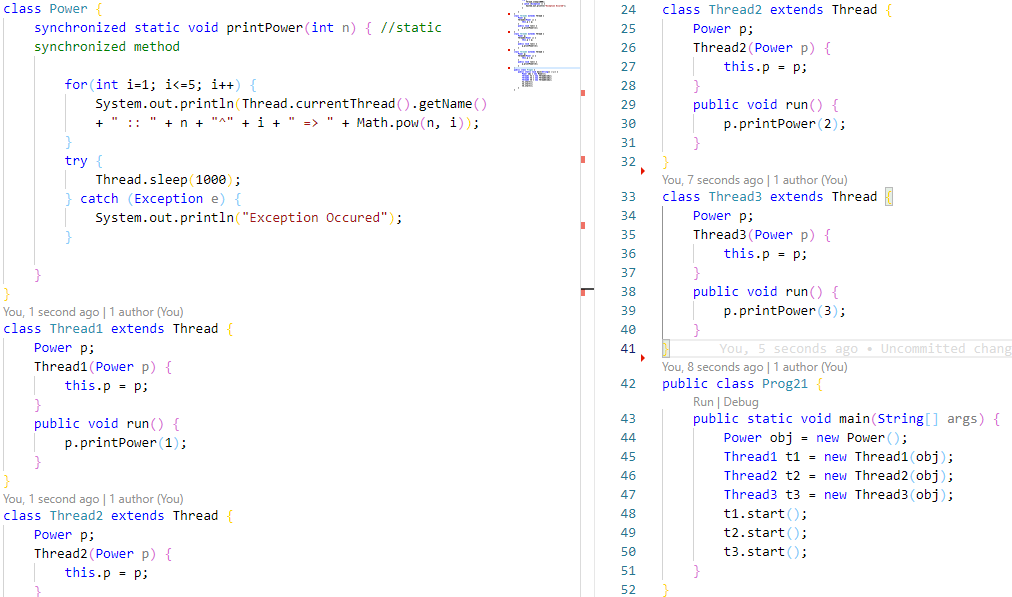


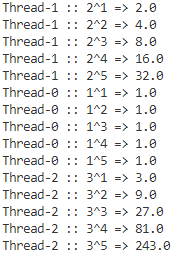
1. Spawn 3 child threads with different priorities. Display their names and priorities.



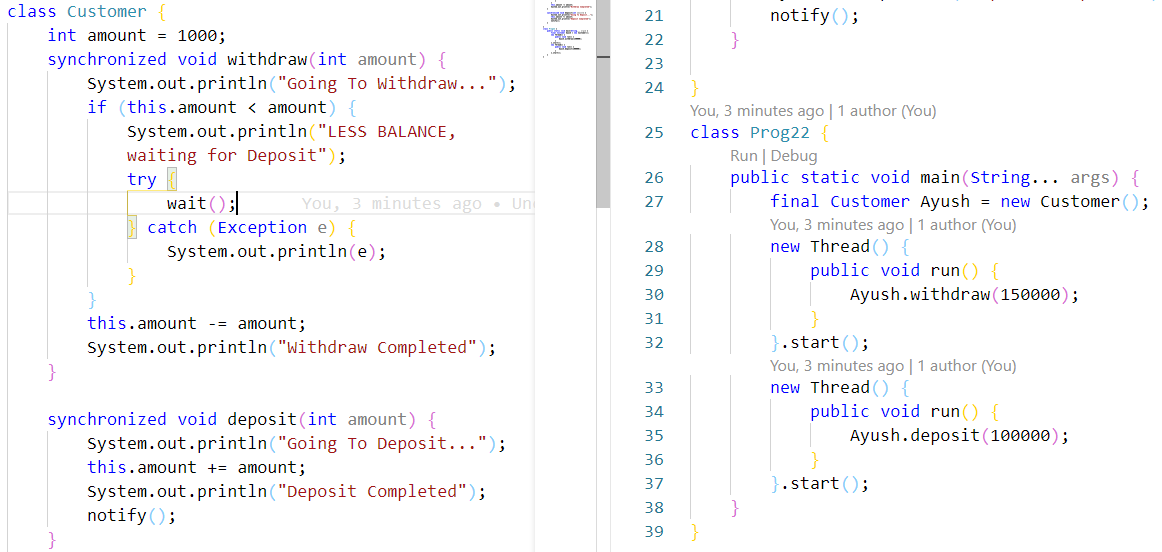
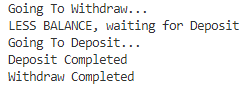
Output:

1. Demonstrate the use of synchronization by spawning 3 different threads.



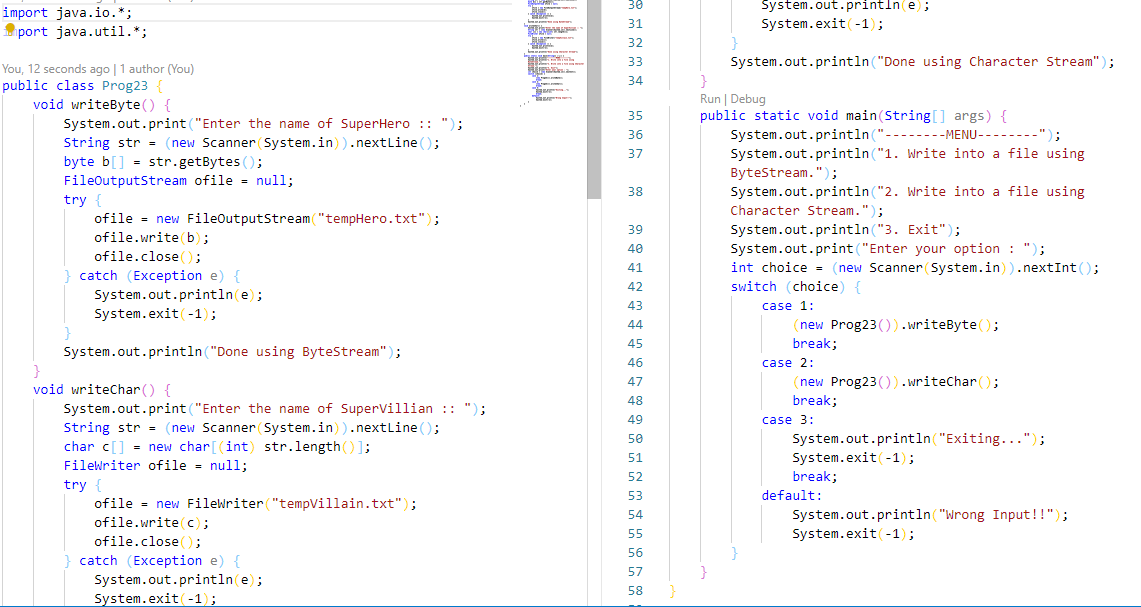
Output:

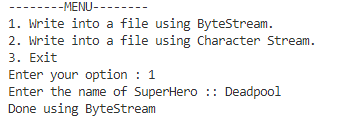
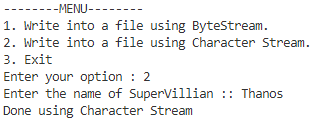
1. Demonstrate inter-thread communication.



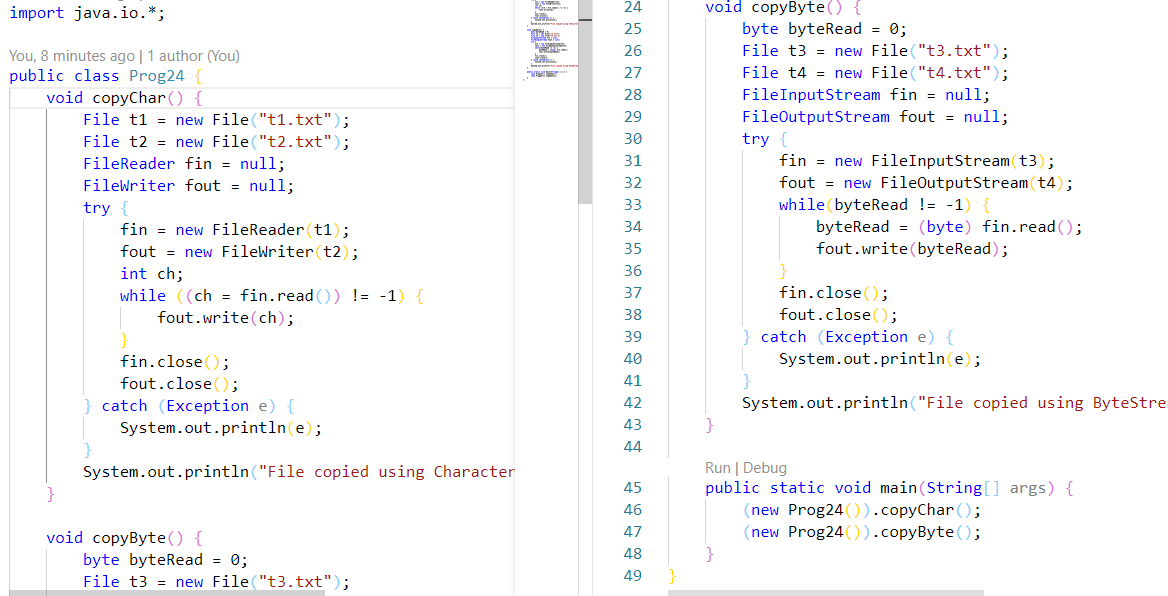
Output:

1. Take input from keyboard and write into a file using character stream and byte stream.

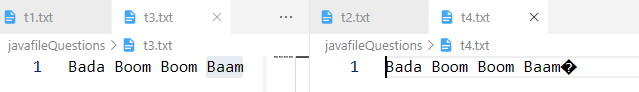
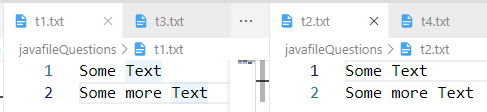


Output:

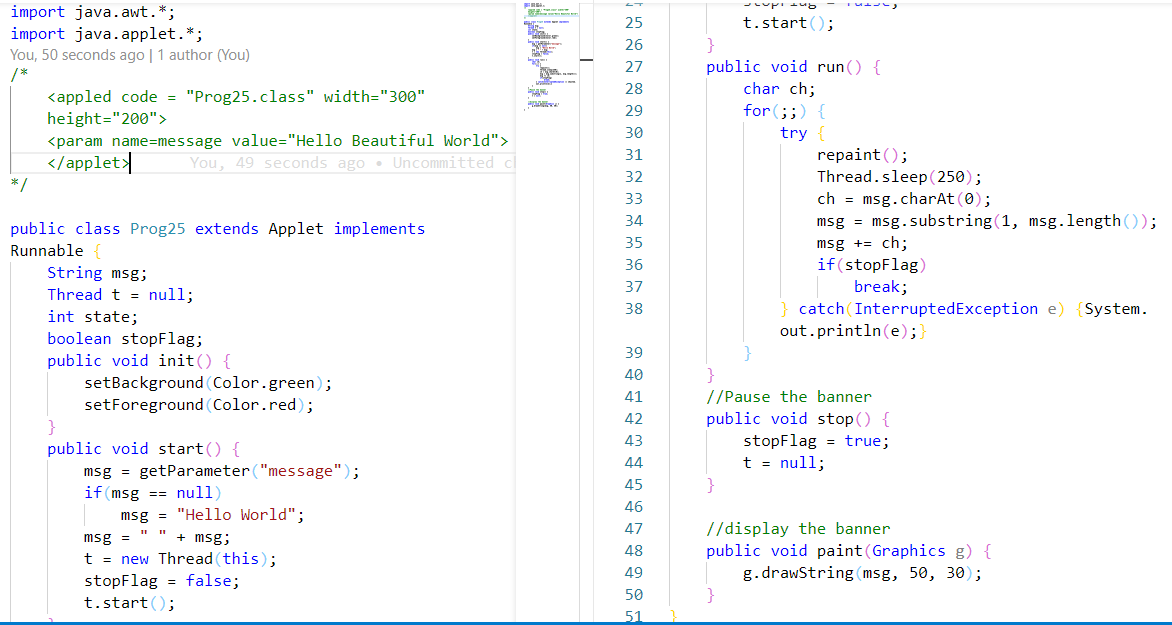
1. Copy an existing text file into a newly created text file using both types of stream.

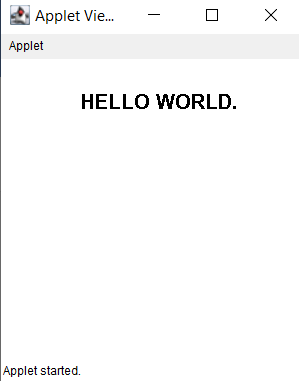


Output:

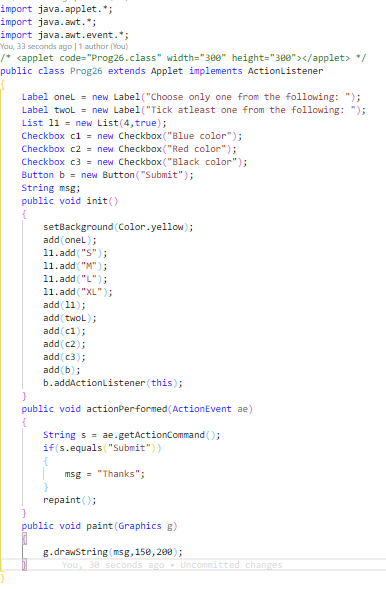


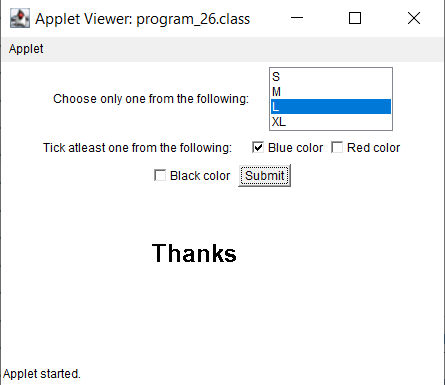
1. Write an applet to Display a moving banner.



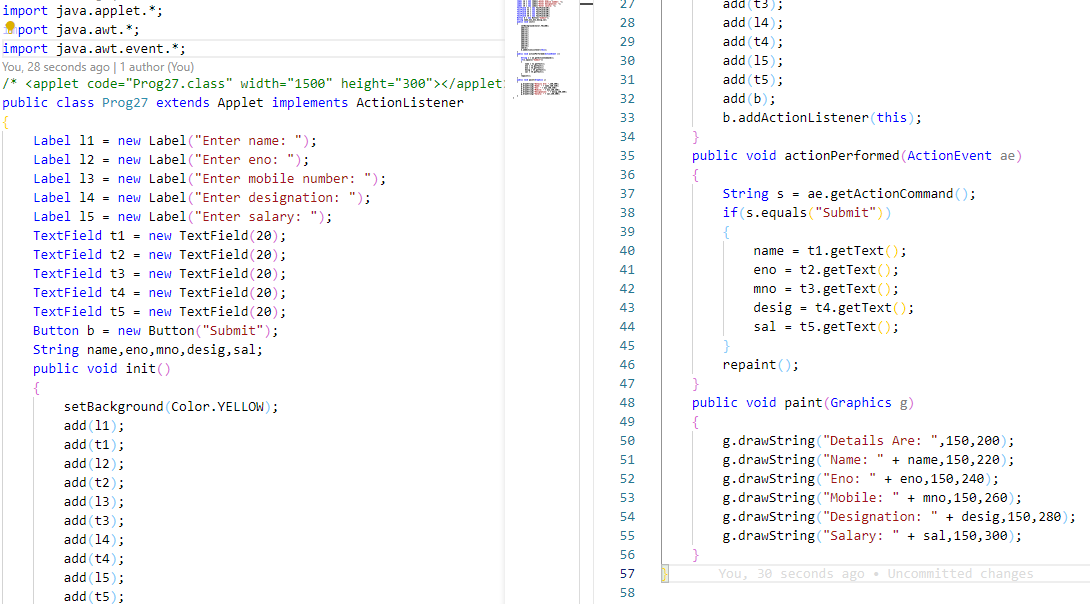
Output:

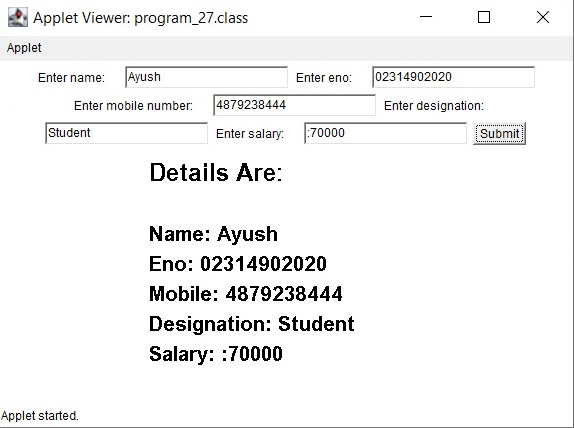
1. Write an applet that shows the following AWT controls  
    -> checkbox  
    -> choice list  
    -> push button

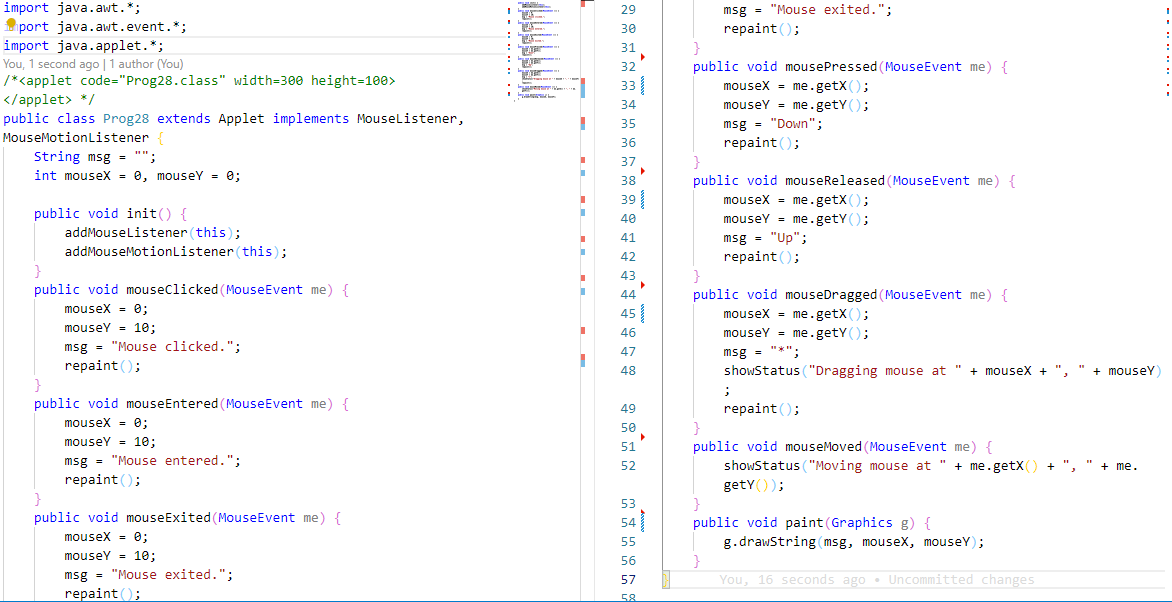


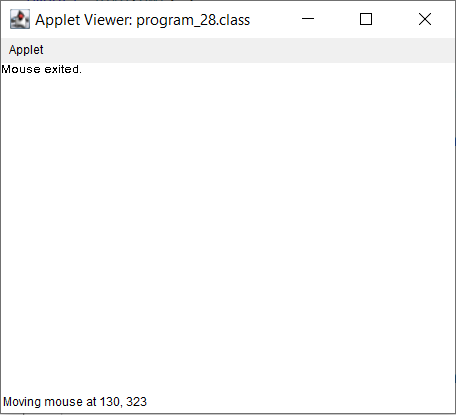
Output:

1. WAP to accept details of employee(name , eno ,mobile no, designation, salary) using AWT controls.

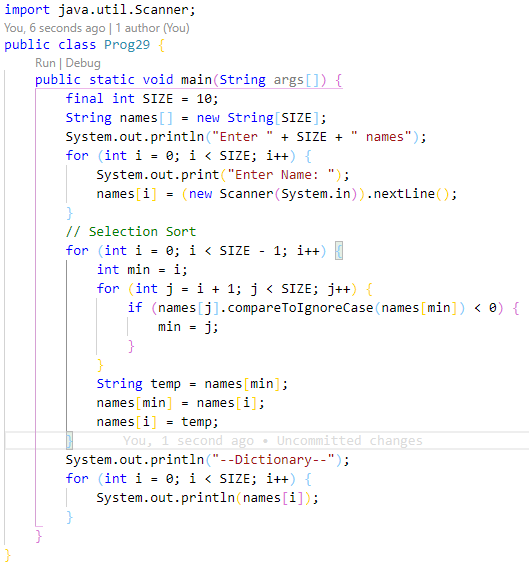
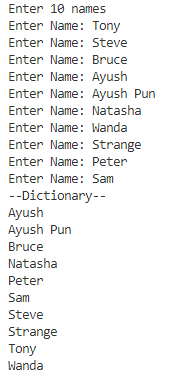


Output:

1. Write an applet that implements MouseListener and MouseMotionListener.

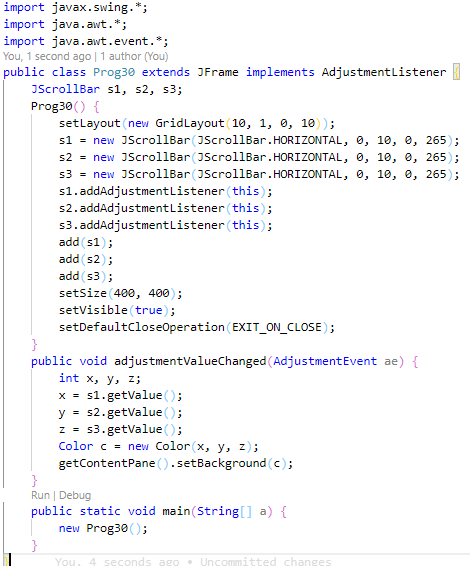
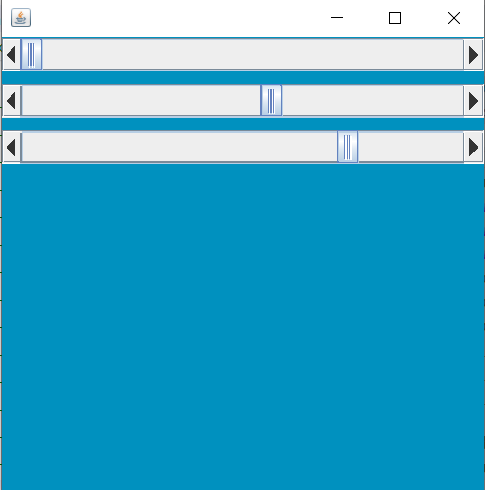
Output:

1. WAP that accepts 10 names from keyboard and arrange them in dictionary order.



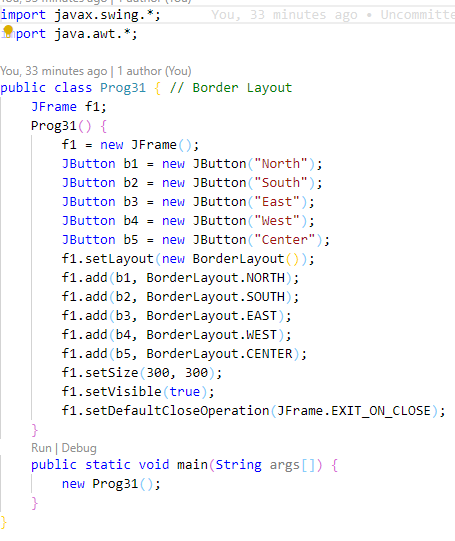
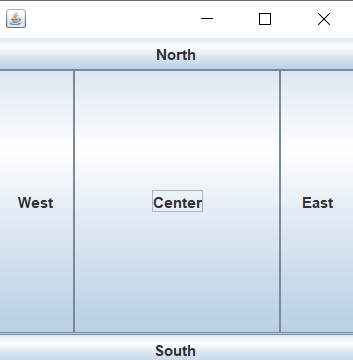
Output:

1. Write an applet / swing that demonstrates working of 3 scrollbars (RGB) to change background color.



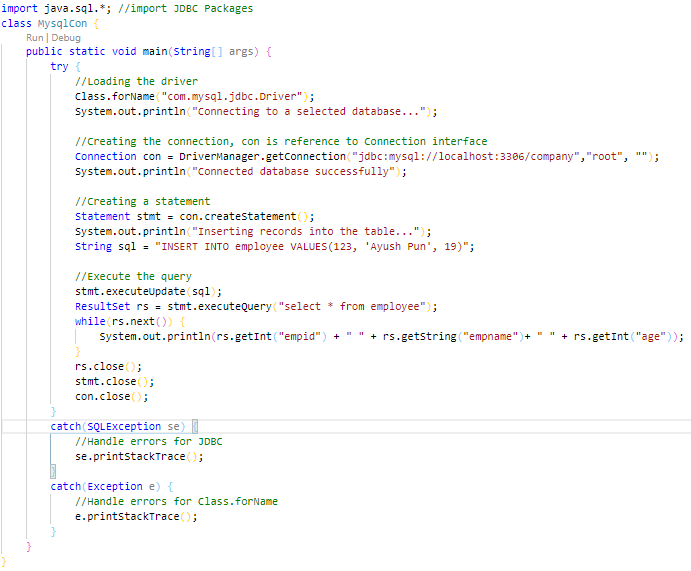
Output:

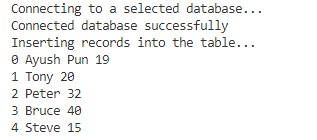
1. Write a program to implement any one of the 4 layout managers.



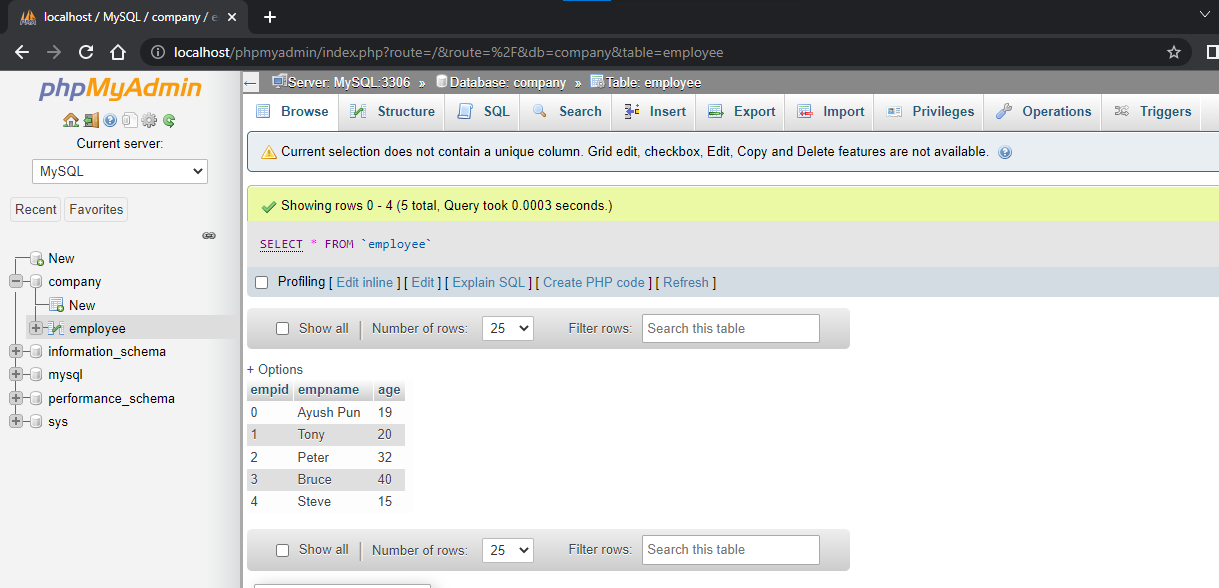
Output:

32. WAP to connect to any database using JDBC Type 4 driver.





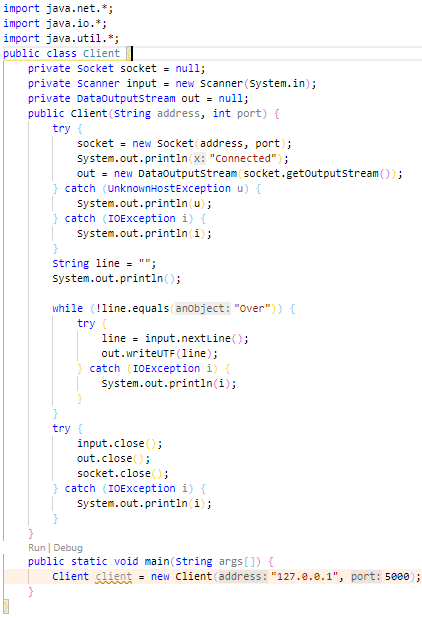
Output:



1. WAP to demonstrate use of TCP and UDP methods.

Server Side :



Client Side: