

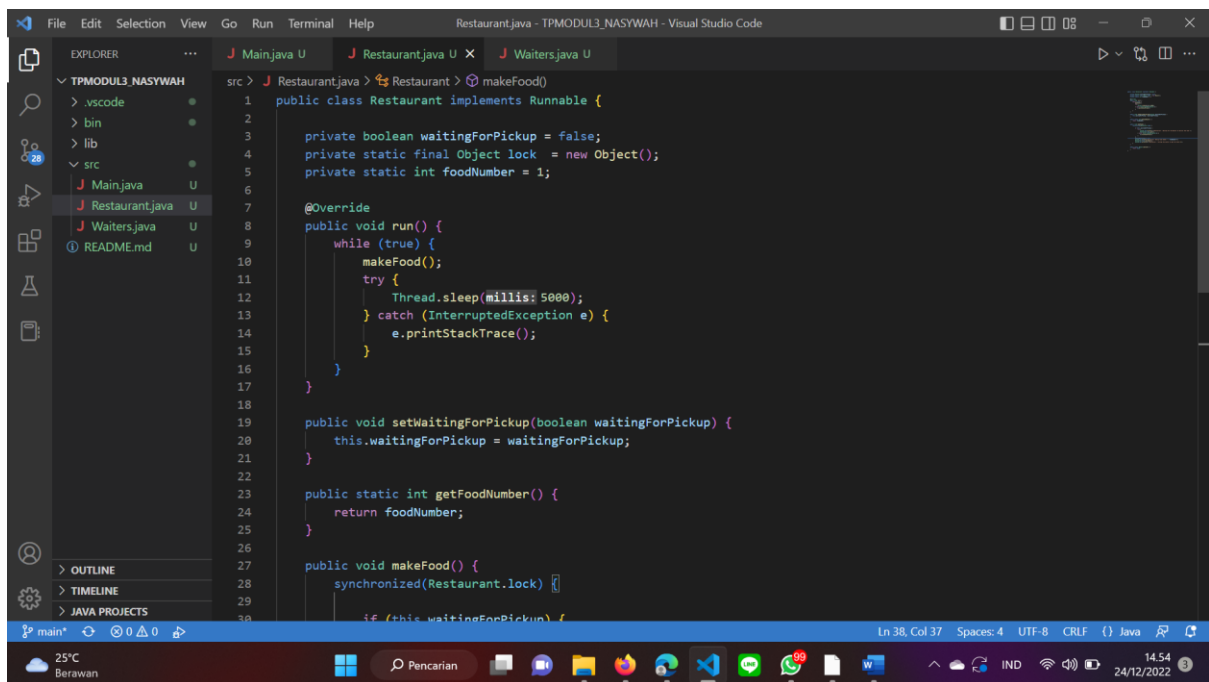
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## PRAKTIKUM OOP MODUL 3

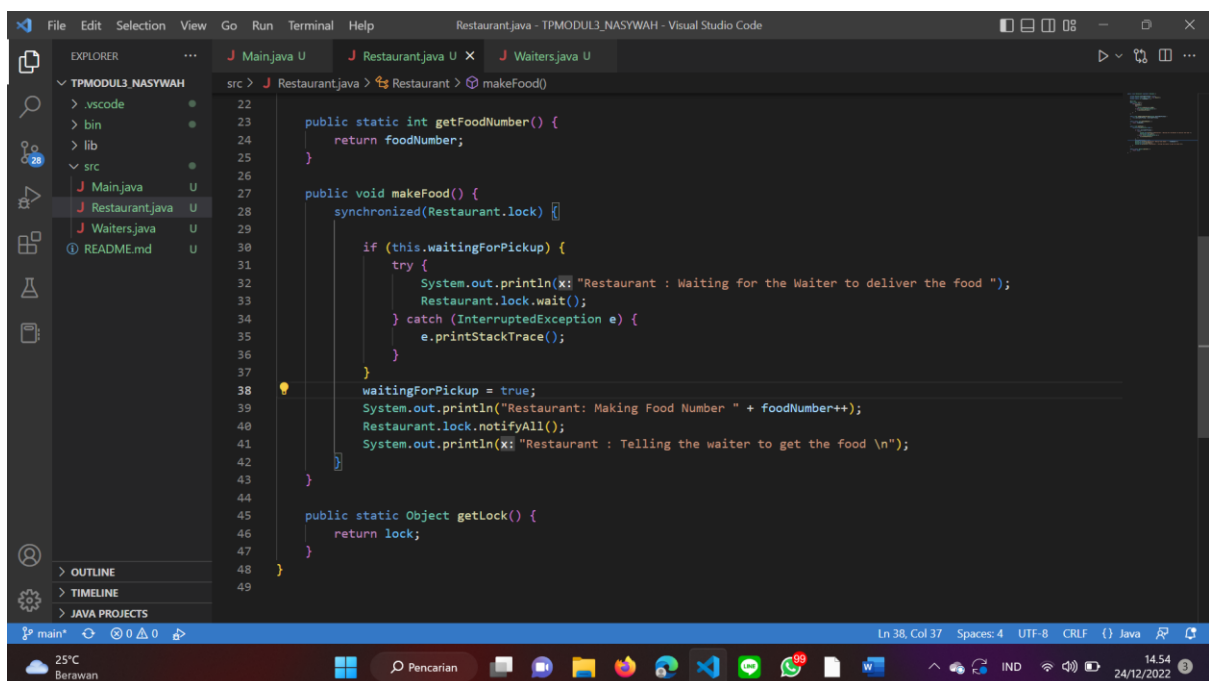
### Restaurant.java



```
File Edit Selection View Go Run Terminal Help
Restaurant.java - TPMODUL3_NASYWAH - Visual Studio Code

EXPLORER
TPMODUL3_NASYWAH
  .vscode
  bin
  lib
  src
    Main.java
    Restaurant.java
    Waiters.java
    README.md

src > Restaurant.java > Restaurant > makeFood()
1 public class Restaurant implements Runnable {
2
3     private boolean waitingForPickup = false;
4     private static final Object lock = new Object();
5     private static int foodNumber = 1;
6
7     @Override
8     public void run() {
9         while (true) {
10             makeFood();
11             try {
12                 Thread.sleep(5000);
13             } catch (InterruptedException e) {
14                 e.printStackTrace();
15             }
16         }
17     }
18
19     public void setWaitingForPickup(boolean waitingForPickup) {
20         this.waitingForPickup = waitingForPickup;
21     }
22
23     public static int getFoodNumber() {
24         return foodNumber;
25     }
26
27     public void makeFood() {
28         synchronized(Restaurant.lock) {
29             if (this.waitingForPickup) {
```



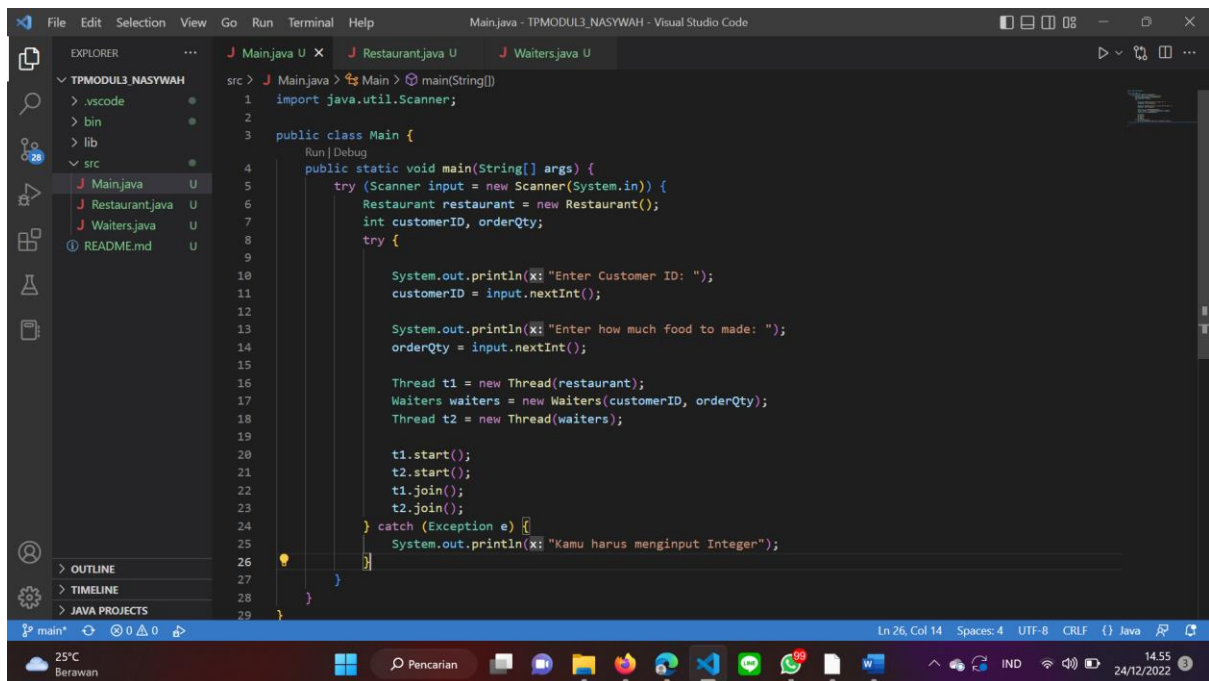
```
30             if (this.waitingForPickup) {
31                 try {
32                     System.out.println("Restaurant : Waiting for the waiter to deliver the food ");
33                     Restaurant.lock.wait();
34                 } catch (InterruptedException e) {
35                     e.printStackTrace();
36                 }
37             }
38             waitingForPickup = true;
39             System.out.println("Restaurant: Making Food Number " + foodNumber++);
40             Restaurant.lock.notifyAll();
41             System.out.println("Restaurant : Telling the waiter to get the food \n");
42         }
43     }
44
45     public static Object getLock() {
46         return lock;
47     }
48 }
49
```

## Waiters.java

```
1 public class Waiters implements Runnable {
2
3     private final int orderQty;
4     private final int customerID;
5     static int foodPrice = 35000;
6
7     public Waiters(int customerID, int orderQty) {
8         this.customerID = customerID;
9         this.orderQty = orderQty;
10    }
11
12    @Override
13    public void run() {
14        while (true) {
15            getFood();
16            try {
17                Thread.sleep(15000);
18            } catch (InterruptedException e) {
19                e.printStackTrace();
20            }
21        }
22    }
23
24    public void orderInfo() {
25        System.out.println("=====");
26        System.out.println("Customer ID : " + this.customerID);
27        System.out.println("Number of food : " + this.orderQty);
28        System.out.println("Total Price : " + this.orderQty * foodPrice);
29        System.out.println("=====");
30    }
31}
```

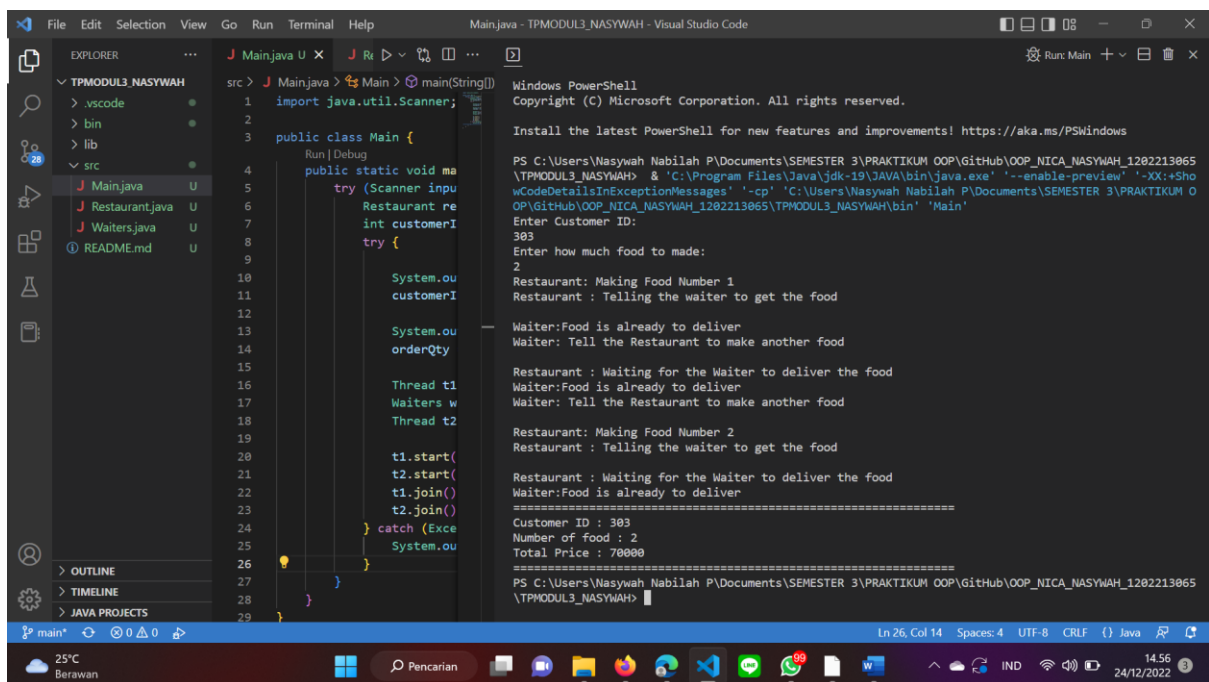
```
23 public void orderInfo() {
24     System.out.println("=====");
25     System.out.println("Customer ID : " + this.customerID);
26     System.out.println("Number of food : " + this.orderQty);
27     System.out.println("Total Price : " + this.orderQty * foodPrice);
28     System.out.println("=====");
29 }
30
31 public void getFood() {
32     synchronized(Restaurant.getLock()) {
33
34         System.out.println("Waiter:Food is already to deliver ");
35         Restaurant restaurant = new Restaurant();
36         restaurant.setWaitingForPickup(waitingForPickup: false);
37
38         if (Restaurant.getFoodNumber() == this.orderQty +1) {
39             orderInfo();
40             System.exit(status: 0);
41         }
42         Restaurant.getLock().notifyAll();
43         System.out.println("Waiter: Tell the Restaurant to make another food\n");
44     }
45 }
46
47 }
48
49 }
```

## Main.java



```
src > J Mainjava > Main > main(String[])
1  import java.util.Scanner;
2
3  public class Main {
4      Run | Debug
5      public static void main(String[] args) {
6          try (Scanner input = new Scanner(System.in)) {
7              Restaurant restaurant = new Restaurant();
8              int customerID, orderQty;
9              try {
10
11                  System.out.println("Enter Customer ID: ");
12                  customerID = input.nextInt();
13
14                  System.out.println("Enter how much food to made: ");
15                  orderQty = input.nextInt();
16
17                  Thread t1 = new Thread(restaurant);
18                  Waiters waiters = new Waiters(customerID, orderQty);
19                  Thread t2 = new Thread(waiters);
20
21                  t1.start();
22                  t2.start();
23                  t1.join();
24                  t2.join();
25              } catch (Exception e) {
26                  System.out.println("Kamu harus menginput Integer");
27              }
28          }
29      }
}
```

## Output:



```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Nasywah Nabilah P\Documents\SEMESTER 3\PRAKTIKUM OOP\GitHub\OOP_NICA_NASYWAH_1202213865\TPMODUL3_NASYWAH> & 'C:\Program Files\Java\jdk-19\JAVA\bin\java.exe' '-enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Nasywah Nabilah P\Documents\SEMESTER 3\PRAKTIKUM OOP\GitHub\OOP_NICA_NASYWAH_1202213865\TPMODUL3_NASYWAH\bin\' 'Main'
Enter Customer ID:
303
Enter how much food to made:
2
Restaurant: Making Food Number 1
Restaurant : Telling the waiter to get the food

Waiter:Food is already to deliver
Waiter: Tell the Restaurant to make another food

Restaurant : Waiting for the Waiter to deliver the food
Waiter:Food is already to deliver
Waiter: Tell the Restaurant to make another food

Restaurant: Making Food Number 2
Restaurant : Telling the waiter to get the food

Restaurant : Waiting for the Waiter to deliver the food
Waiter:Food is already to deliver
=====
Customer ID : 303
Number of food : 2
Total Price : 70000
=====
PS C:\Users\Nasywah Nabilah P\Documents\SEMESTER 3\PRAKTIKUM OOP\GitHub\OOP_NICA_NASYWAH_1202213865\TPMODUL3_NASYWAH>
```