



Package Explorer ×

- > CDAC NOIDA PGDAI ASSIGNMENT - 1
- > CDAC NOIDA PGDAI ASSIGNMENT - 10
- > CDAC NOIDA PGDAI ASSIGNMENT - 11
- > CDAC NOIDA PGDAI ASSIGNMENT - 12
  - src
    - (default package)
      - Assignment\_12\_qs\_1.java
    - JRE System Library [jre]
  - > CDAC NOIDA PGDAI ASSIGNMENT - 2
  - > CDAC NOIDA PGDAI ASSIGNMENT - 3
  - > CDAC NOIDA PGDAI ASSIGNMENT - 4
  - > CDAC NOIDA PGDAI ASSIGNMENT - 5
  - > CDAC NOIDA PGDAI ASSIGNMENT - 6
  - > CDAC NOIDA PGDAI ASSIGNMENT - 7
  - > CDAC NOIDA PGDAI ASSIGNMENT - 8
  - > CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_... Assignment\_... Assignment\_... Assignment\_... Assignment\_... × »26

```
1 // Name : ADVAIT GURUNATH CHAVAN
2 // Email ID : advaitchavan135@gmail.com
3 // CDAC NOIDA JAVA PROGRAMMING Assignment 12 - Question - 1
4
5 public class Assignment_12_qs_1 {
6     public static <T> boolean areArraysEqual(T[] a, T[] b) {
7         if (a == null || b == null)
8             return false;
9         if (a.length != b.length)
10            return false;
11         for (int i = 0; i < a.length; i++) {
12             if (!a[i].equals(b[i])) { // Uses T's equals() method.
13                 return false;
14             }
15         }
16         return true;
17     }
18
19     public static void main(String[] args) {
20         Integer[] arr1 = {1, 2, 3};
21         Integer[] arr2 = {1, 2, 3};
22         Integer[] arr3 = {1, 2, 4};
23     }
24 }
```

Task List ×

Find ▾ All ▾ Activate... ?

Outline ×

&gt; Assignment\_12\_qs\_1

Problems @ Javadoc Console ×

<terminated> Assignment\_12\_qs\_1 [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130

arr1 and arr2 equal? true

arr1 and arr3 equal? false

Writable

Smart Insert

5 : 27 : 166



Type here to search



Desktop

12:02  
14-06-2025

2

File

Edit

Source

Refactor

Navigate

Search

Project

Run

Window

Help

Package Explorer

CDAC NOIDA PGDAI ASSIGNMENT - 1

CDAC NOIDA PGDAI ASSIGNMENT - 10

CDAC NOIDA PGDAI ASSIGNMENT - 11

CDAC NOIDA PGDAI ASSIGNMENT - 12

src

(default package)

Assignment\_12\_qs\_1.java

Assignment\_12\_qs\_2.java

JRE System Library [jre]

CDAC NOIDA PGDAI ASSIGNMENT - 2

CDAC NOIDA PGDAI ASSIGNMENT - 3

CDAC NOIDA PGDAI ASSIGNMENT - 4

CDAC NOIDA PGDAI ASSIGNMENT - 5

CDAC NOIDA PGDAI ASSIGNMENT - 6

CDAC NOIDA PGDAI ASSIGNMENT - 7

CDAC NOIDA PGDAI ASSIGNMENT - 8

CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_12\_qs\_2.java

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```
int oddSum = 0;
for (Number num : numbers) {
    int value = num.intValue();
    if (value % 2 == 0) {
        evenSum += value;
    } else {
        oddSum += value;
    }
}

Map<String, Integer> result = new HashMap<>();
result.put("even", evenSum);
result.put("odd", oddSum);
return result;

}

public static void main(String[] args) {
    List<Integer> nums = Arrays.asList(1, 2, 3, 4, 5, 6);
    Map<String, Integer> result = sumEvenOdd(nums);
    System.out.println("Even Sum: " + result.get("even") + ", Odd Sum: " + result.get("odd"));
}
}
```

Task List

Find

All

Activate...

Outline

Assignment\_12\_qs\_2

Problems

Javadoc

Console

<terminated> Assignment\_12\_qs\_2 [Java Application]

C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130

Even Sum: 12, Odd Sum: 9

Writable

Smart Insert

7 : 32 : 194

Type here to search

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14-06-2025



Package Explorer ×

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- > CDAC NOIDA PGDAI ASSIGNMENT - 12
  - src
    - (default package)
      - Assignment\_12\_qs\_1.java
      - Assignment\_12\_qs\_2.java
      - Assignment\_12\_qs\_3.java
  - JRE System Library [jre]
- > CDAC NOIDA PGDAI ASSIGNMENT - 2
- > CDAC NOIDA PGDAI ASSIGNMENT - 3
- > CDAC NOIDA PGDAI ASSIGNMENT - 4
- > CDAC NOIDA PGDAI ASSIGNMENT - 5
- > CDAC NOIDA PGDAI ASSIGNMENT - 6
- > CDAC NOIDA PGDAI ASSIGNMENT - 7
- > CDAC NOIDA PGDAI ASSIGNMENT - 8
- > CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_...

Assignment\_...

Assignment\_...

Assignment\_...

Assignment\_... ×

»28

```
1 // Name : ADVAIT GURUNATH CHAVAN
2 // Email ID : advaitchavan135@gmail.com
3 // CDAC NOIDA JAVA PROGRAMMING Assignment 12 - Question - 3
4
5 import java.util.*;
6
7 public class Assignment_12_qs_3 {
8     public static <T> List<T> reverseList(List<T> list) {
9         List<T> reversed = new ArrayList<>(list);
10         Collections.reverse(reversed);
11         return reversed;
12     }
13
14     public static void main(String[] args) {
15         List<String> names = new ArrayList<>(Arrays.asList("Advait", "Gurunath", "Chavan"));
16         List<String> reversedNames = reverseList(names);
17         System.out.println("Original list: " + names);
18         System.out.println("Reversed list: " + reversedNames);
19     }
20 }
21
```

Task List ×

Find ▾ All ▾ Activate... ?

Outline ×

- Assignment\_12\_qs\_3
  - reverseList(List<T>) <T> : List<T>
  - main(String[]) : void

Problems @ Javadoc Console ×

<terminated> Assignment\_12\_qs\_3 [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130

Original list: [Advait, Gurunath, Chavan]  
Reversed list: [Chavan, Gurunath, Advait]

Writable

Smart Insert

15 : 89 : 517

Setting VM arguments



Type here to search



Desktop

12:07  
14-06-2025



Package Explorer ×

- > CDAC NOIDA PGDAI ASSIGNMENT - 1
- > CDAC NOIDA PGDAI ASSIGNMENT - 10
- > CDAC NOIDA PGDAI ASSIGNMENT - 11
- > CDAC NOIDA PGDAI ASSIGNMENT - 12
  - src
    - (default package)
      - Assignment\_12\_qs\_1.java
      - Assignment\_12\_qs\_2.java
      - Assignment\_12\_qs\_3.java
      - Assignment\_12\_qs\_4.java
- > JRE System Library [jre]
- > CDAC NOIDA PGDAI ASSIGNMENT - 2
- > CDAC NOIDA PGDAI ASSIGNMENT - 3
- > CDAC NOIDA PGDAI ASSIGNMENT - 4
- > CDAC NOIDA PGDAI ASSIGNMENT - 5
- > CDAC NOIDA PGDAI ASSIGNMENT - 6
- > CDAC NOIDA PGDAI ASSIGNMENT - 7
- > CDAC NOIDA PGDAI ASSIGNMENT - 8
- > CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_...

Assignment\_...

Assignment\_...

Assignment\_...

Assignment\_... ×

»29

```
1 // Name : ADVAIT GURUNATH CHAVAN
2 // Email ID : advaitchavan135@gmail.com
3 // CDAC NOIDA JAVA PROGRAMMING Assignment 12 - Question - 4
4
5 import java.util.*;
6
7 public class Assignment_12_qs_4 {
8     public static <K, V> void printMap(Map<K, V> map) {
9         for (Map.Entry<K, V> entry : map.entrySet()) {
10             System.out.println("Key: " + entry.getKey() + ", Value: " + entry.getValue());
11         }
12     }
13
14     public static void main(String[] args) {
15         Map<String, Integer> map = new HashMap<>();
16         map.put("Apple", 10);
17         map.put("Banana", 20);
18         map.put("Advait", 03052001);
19         map.put("Gurunath", 29011970);
20         printMap(map);
21     }
22 }
```

Problems @ Javadoc Console ×

```
<terminated> Assignment_12_qs_4 [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.6.v20250130
Key: Gurunath, Value: 29011970
Key: Apple, Value: 10
Key: Advait, Value: 807937
Key: Banana, Value: 20
```

Task List ×

Find ▾ All ▾ Activate...

Outline ×

- Assignment\_12\_qs\_4
  - printMap(Map<K, V>) <K, V> : void
  - main(String[]) : void

Writable

Smart Insert

19 : 39 : 661

Desktop

ENG

12:11  
14-06-2025

The screenshot shows the Eclipse IDE interface with the following components:

- Package Explorer:** Displays a project structure with a package named 'src' containing five Java files: 'Assignment\_12\_qs\_1.java', 'Assignment\_12\_qs\_2.java', 'Assignment\_12\_qs\_3.java', 'Assignment\_12\_qs\_4.java', and 'Assignment\_12\_qs\_5.java'. The 'JRE System Library [jre]' is also listed.
- Editor:** Shows the code for 'Assignment\_12\_qs\_5.java'. The code implements a method to merge two lists alternately. The visible code is:

```
16 merged.add(list1.get(i));
17 merged.add(list2.get(i));
18 }
19
20 // Append the remaining elements from the longer list.
21 if (size1 > minSize) {
22     merged.addAll(list1.subList(minSize, size1));
23 }
24 if (size2 > minSize) {
25     merged.addAll(list2.subList(minSize, size2));
26 }
27 return merged;
28 }
29
30 public static void main(String[] args) {
31     List<String> letters = Arrays.asList("A", "B", "C");
32     List<String> numbers = Arrays.asList("1", "2", "3", "4");
33     List<String> mergedList = mergeAlternate(letters, numbers);
34     System.out.println("Merged list: " + mergedList);
35 }
36 }
37
```
- Task List:** Contains a search bar and a list of tasks. The task 'Assignment\_12\_qs\_5' is listed.
- Outline:** Shows the structure of the code, with 'Assignment\_12\_qs\_5' selected.
- Problems/Console:** Displays the output of the program: 'Merged list: [A, 1, B, 2, C, 3, 4]'. The status bar at the bottom indicates 'Writable', 'Smart Insert', and '7 : 32 : 194'.



Package Explorer ×

- > CDAC NOIDA PGDAI ASSIGNMENT - 1
- > CDAC NOIDA PGDAI ASSIGNMENT - 10
- > CDAC NOIDA PGDAI ASSIGNMENT - 11
- ▼ CDAC NOIDA PGDAI ASSIGNMENT - 12
  - src
    - (default package)
      - Assignment\_12\_qs\_1.java
      - Assignment\_12\_qs\_2.java
      - Assignment\_12\_qs\_3.java
      - Assignment\_12\_qs\_4.java
      - Assignment\_12\_qs\_5.java
      - University.java
- > JRE System Library [jre]
- > CDAC NOIDA PGDAI ASSIGNMENT - 2
- > CDAC NOIDA PGDAI ASSIGNMENT - 3
- > CDAC NOIDA PGDAI ASSIGNMENT - 4
- > CDAC NOIDA PGDAI ASSIGNMENT - 5
- > CDAC NOIDA PGDAI ASSIGNMENT - 6
- > CDAC NOIDA PGDAI ASSIGNMENT - 7
- > CDAC NOIDA PGDAI ASSIGNMENT - 8
- > CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_... Assignment\_... Assignment\_... Assignment\_... University.java × »31

```
1 // Name : ADVAIT GURUNATH CHAVAN
2 // Email ID : advaitchavan135@gmail.com
3 // CDAC NOIDA JAVA PROGRAMMING Assignment 12 - Question - 6
4
5 public class University {
6     static class Department {
7         private String departmentName;
8         private int facultyCount;
9
10        public Department(String departmentName, int facultyCount) {
11            this.departmentName = departmentName;
12            this.facultyCount = facultyCount;
13        }
14
15        public void displayInfo() {
16            System.out.println("Department: " + departmentName + ", Faculty Count: " + facultyCount);
17        }
18    }
19
20    public static void main(String[] args) {
21        Department csDept = new Department("Computer Science", 50);
22        csDept.displayInfo();
23    }
24 }
```

Task List ×

Find ▾ All ▾ Activate... ?

Outline ×

&gt; University

Problems @ Javadoc Console ×

<terminated> University [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130-0529\jre\bin\java.exe  
Department: Computer Science, Faculty Count: 50

Writable

Smart Insert

3 : 62 : 136



Type here to search



Desktop

12:15  
14-06-2025

File

Edit

Source

Refactor

Navigate

Search

Project

Run

Window

Help

Package Explorer

CDAC NOIDA PGDAI ASSIGNMENT - 12/src/Computer.java

CDAC NOIDA PGDAI ASSIGNMENT - 1

CDAC NOIDA PGDAI ASSIGNMENT - 10

CDAC NOIDA PGDAI ASSIGNMENT - 11

CDAC NOIDA PGDAI ASSIGNMENT - 12

src

(default package)

Assignment\_12\_qs\_1.java

Assignment\_12\_qs\_2.java

Assignment\_12\_qs\_3.java

Assignment\_12\_qs\_4.java

Assignment\_12\_qs\_5.java

Computer.java

University.java

JRE System Library [jre]

CDAC NOIDA PGDAI ASSIGNMENT - 2

CDAC NOIDA PGDAI ASSIGNMENT - 3

CDAC NOIDA PGDAI ASSIGNMENT - 4

CDAC NOIDA PGDAI ASSIGNMENT - 5

CDAC NOIDA PGDAI ASSIGNMENT - 6

CDAC NOIDA PGDAI ASSIGNMENT - 7

CDAC NOIDA PGDAI ASSIGNMENT - 8

CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_... Assignment\_... Assignment\_... University.java Computer.java

1 // Name : ADVAIT GURUNATH CHAVAN

2 // Email ID : advaitchavan135@gmail.com

3 // CDAC NOIDA JAVA PROGRAMMING Assignment 12 - Question - 7

4

5 public class Computer {

6 // Non-static inner class

7 class Processor {

8 private String brand;

9 private String speed;

10

11 public Processor(String brand, String speed) {

12 this.brand = brand;

13 this.speed = speed;

14 }

15

16 public void displayDetails() {

17 System.out.println("Processor Brand: " + brand + ", Speed: " + speed);

18 }

19 }

20

21 public static void main(String[] args) {

22 Computer computer = new Computer();

23

Task List

Find

All

Activate...

Outline

Computer

Processor

main(String[]) : void

Problems

Javadoc

Console

<terminated> Computer [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130-0529\jre\

Processor Brand: Intel, Speed: 3.5GHz

Writable

Smart Insert

23 : 60 : 732

12:17

14-06-2025



Package Explorer

CDAC NOIDA PGDAI ASSIGNMENT - 1

CDAC NOIDA PGDAI ASSIGNMENT - 10

CDAC NOIDA PGDAI ASSIGNMENT - 11

CDAC NOIDA PGDAI ASSIGNMENT - 12

src

(default package)

Assignment\_12\_qs\_1.java

Assignment\_12\_qs\_2.java

Assignment\_12\_qs\_3.java

Assignment\_12\_qs\_4.java

Assignment\_12\_qs\_5.java

Computer.java

Person\_10.java

University.java

JRE System Library [jre]

CDAC NOIDA PGDAI ASSIGNMENT - 2

CDAC NOIDA PGDAI ASSIGNMENT - 3

CDAC NOIDA PGDAI ASSIGNMENT - 4

CDAC NOIDA PGDAI ASSIGNMENT - 5

CDAC NOIDA PGDAI ASSIGNMENT - 6

CDAC NOIDA PGDAI ASSIGNMENT - 7

CDAC NOIDA PGDAI ASSIGNMENT - 8

CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_... Assignment\_... University.java Computer.java Person\_10.java

6 // Inner class Address

7 public class Address {

8 private String city;

9 private String state;

10

11 public Address(String city, String state) {

12 this.city = city;

13 this.state = state;

14 }

15

16 public void displayAddress() {

17 System.out.println("City: " + city + ", State: " + state);

18 }

19 }

20

21 public static void main(String[] args) {

22 Person\_10 person = new Person\_10();

23 Address address = person.new Address("MALVAN", "Maharashtra");

24 address.displayAddress();

25 }

26 }

27

Task List

Find All Activate...

Outline

Person\_10

Address

main(String[]) : void

Problems Javadoc Console

<terminated> Person\_10 [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130-0529\jre\

City: MALVAN, State: Maharashtra

Writable Smart Insert

21 : 45 : 610

12:18 14-06-2025



File

Edit

Source

Refactor

Navigate

Search

Project

Run

Window

Help

Package Explorer

CDAC NOIDA PGDAI ASSIGNMENT - 12/src/Car.java

CDAC NOIDA PGDAI ASSIGNMENT - 12

src

(default package)

Assignment\_12\_qs\_1.java

Assignment\_12\_qs\_2.java

Assignment\_12\_qs\_3.java

Assignment\_12\_qs\_4.java

Assignment\_12\_qs\_5.java

Car.java

Computer.java

Person\_10.java

University.java

JRE System Library [jre]

CDAC NOIDA PGDAI ASSIGNMENT - 2

CDAC NOIDA PGDAI ASSIGNMENT - 3

CDAC NOIDA PGDAI ASSIGNMENT - 4

CDAC NOIDA PGDAI ASSIGNMENT - 5

CDAC NOIDA PGDAI ASSIGNMENT - 6

CDAC NOIDA PGDAI ASSIGNMENT - 7

CDAC NOIDA PGDAI ASSIGNMENT - 8

CDAC NOIDA PGDAI ASSIGNMENT - 9

Assignment\_12 - Question - 9

```
3 // CDAC NOIDA JAVA PROGRAMMING Assignment 12 - Question - 9
4
5 public class Car {
6     public void startEngine() {
7         // Local inner class defined within the method.
8         class Engine {
9             public void run() {
10                 System.out.println("Engine is running");
11                 System.out.println("Engine is roaring!!!!");
12                 System.out.println("Let's hit the streets!!!");
13                 System.out.println("Let's burn the tyre rubber!!!");
14             }
15         }
16         Engine engine = new Engine();
17         engine.run();
18     }
19
20     public static void main(String[] args) {
21         Car car = new Car();
22         car.startEngine();
23     }
24 }
```

Task List

Find

All

Activate...

Outline

Car

startEngine() : void

Engine

run() : void

main(String[]) : void

Problems

Javadoc

Console

<terminated> Car [Java Application] C:\Users\Advait\Desktop\SOFTWARES\eclipse-jee-2025-03-R-win32-x86\_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_21.0.6.v20250130-0529\jre\bin\jav

Engine is running

Engine is roaring!!!!

Let's hit the streets!!!

Let's burn the tyre rubber!!!

Writable

Smart Insert

19 : 5 : 658

12:35

14-06-2025

Type here to search

Desktop

ENG

2