

Caveat: These example questions mainly cover topics on reference aliasing, and they are thus not meant as a substitute for studying the lectures and tutorials on the covered topics.

1. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");  
2 Person p2 = new Person("Jiyoon");  
3 System.out.println(p1 != p2);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

`true`

- E. One line output to the console:

`false`

- F. None of the above.

2. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");  
2 Person p2 = new Person("Jiyoon");  
3 Person[] persons = new Person[2];  
4 System.out.println(persons[persons.length()] != null);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

`true`

- E. One line output to the console:

`false`

- F. None of the above.

3. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");
2 Person p2 = new Person("Jiyoon");
3 Person[] persons = new Person[2];
4 System.out.println(persons[persons.length] != null);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

true

- E. One line output to the console:

false

- F. None of the above.

4. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");
2 Person p2 = new Person("Jiyoon");
3 Person[] persons = new Person[2];
4 System.out.println(persons[persons.length - 1] != null);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

true

- E. One line output to the console:

false

- F. None of the above.

5. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");
2 Person p2 = new Person("Jiyoon");
3 Person[] persons = new Person[2];
4 System.out.println(persons[persons.length - 1].name.equals("Jiyoon"));
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.**
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

true

- E. One line output to the console:

false

- F. None of the above.

6. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");
2 Person p2 = new Person("Jiyoon");
3 Person[] persons = {p1, p2};
4 p1 = p2;
5 System.out.println(persons[0] == p1);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

true

- E. One line output to the console:

false

- F. None of the above.

7. Assume that a `Person` class is already defined, and it has an attribute `name` and a constructor that initializes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");
2 Person p2 = new Person("Jiyoon");
3 Person[] persons = {p1, p2};
4 p1 = p2;
5 persons[0] = p2;
6 System.out.println(persons[0] == p1);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

`true`

- E. One line output to the console:

`false`

- F. None of the above.

8. Assume that a `Person` class is already defined, and it has an attribute `name`, a constructor that initializes the person's name from the input string, and a mutator method `setName` that changes the person's name from the input string. Consider the following fragment of Java code (inside some `main` method):

```
1 Person p1 = new Person("Heeyeon");
2 Person p2 = new Person("Jiyoon");
3 Person[] persons = {p1, p2};
4 p1 = persons[1];
5 persons[0] = p2;
6 p2.setName("Jihye");
7 System.out.println(p1.name);
```

What happens when executing the above Java code?

- A. The above Java code does not compile.
- B. A `NullPointerException` occurs.
- C. An `ArrayIndexOutOfBoundsException` occurs.
- D. One line output to the console:

`Heeyeon`

- E. One line output to the console:

`Jiyoon`

- F. One line output to the console:

`Jihye`

- G. None of the above.