



# APSI01: Computer Programming

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Sample Quiz

# Question 1

What is x? What is y?

```
int[] x;
```

```
int[] y = new int[0];
```

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```
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```

Answer:

x is null.

y is not null, but has no elements.

## Question 2

What is `x[0]`? What is the length of `x`?

```
int[][] x = new int[3][];
```

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What is `x[0]`? What is the length of `x`?

```
int[][] x = new int[3][];
```

Answer:

`x[0]` is null,  
but `x.length` is 3.

# Question 3

What is x?

```
int[] x = {1, 2, 3, 4};  
for (int i = 0; i < x.length - 1; i++)  
    x[i] = x[i+1];
```

# Question 3

What is x?

```
int[] x = {1, 2, 3, 4};  
for (int i = 0; i < x.length - 1; i++)  
    x[i] = x[i+1];
```

Answer:

{2, 3, 4, 4}

# Question 4

What is x?

```
int[] x = {1, 2, 3, 4};  
for (int i = 0; i < x.length; i++)  
    x[i] = x[i-1];
```



# Question 4

What is x?

```
int[] x = {1, 2, 3, 4};  
for (int i = 0; i < x.length; i++)  
    x[i] = x[i-1];
```

Answer:

Error accessing x[-1]

# Question 5

What is x?

```
int[] x = {1, 2, 3, 4};  
for (int i = 1; i < x.length; i++)  
    x[i] = x[i-1];
```

# Question 5

What is x?

```
int[] x = {1, 2, 3, 4};  
for (int i = 1; i < x.length; i++)  
    x[i] = x[i-1];
```

Answer:

```
{1, 1, 1, 1}
```

# Question 6

What is y?

```
int[] x = {1, 2, 3, 4};
```

```
int[] y;
```

```
for (int i = 1; i < x.length; i++)
```

```
    y[i] = x[i-1];
```

# Question 6

What is y?

```
int[] x = {1, 2, 3, 4};
```

```
int[] y;
```

```
for (int i = 1; i < x.length; i++)
```

```
    y[i] = x[i-1];
```

Answer:

Error! y is null.

# Question 7

What is y?

```
int[] x = {1, 2, 3, 4};
```

```
int[] y = new int[5];
```

```
for (int i = 1; i < x.length; i++)
```

```
    y[i] = x[i-1];
```

# Question 7

What is y?

```
int[] x = {1, 2, 3, 4};
```

```
int[] y = new int[5];
```

```
for (int i = 1; i < x.length; i++)
```

```
    y[i] = x[i-1];
```

Answer:

```
{0, 1, 2, 3, 0}
```

# Review of OO Concepts

```
Student[] list = new Student[3];
```

```
list[0] = new Student("Mary", 1234);
```

```
list[1] = new StudentAthlete("Bob", 1235,  
    "Golf");
```

```
list[2] = new StudentNerd("John", 1236, 500);
```



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list[2] instanceof StudentNerd

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list[2] instanceof StudentNerd

Answer:

true

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list[2] instanceof StudentAthlete

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list[2] instanceof StudentAthlete

Answer:

false

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```

list[2] instanceof Student

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```
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```

```
list[2] instanceof Student
```

Answer:

true

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```
( (StudentNerd) list[0]). toString()
```

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```
( (StudentNerd) list[0]). toString()
```

Answer:

error! Can't cast a Student into StudentNerd



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```

```
( (Student) list[1] ). toString()
```

Answer:

```
"Name: Bob Student ID: 1235 Sport: Golf"
```