
Activity
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Q1: Find ALL Errors (Compilation + Logical)

```java
import java.util.Scanner;

public class Test {

public static void main(String[] args) {

        Scanner sc = new Scanner(System.in)

        System.out.println("Enter your age:");
        int age = sc.nextDouble();

        if (age = 18)
            System.out.println("Exactly 18");
        else if (age > 18)
            System.out.println("Adult")
        else
            System.out.println("Teenager");

    }
}
```

Q1: Answer

```java
import java.util.Scanner;

public class Test {

public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter your age:");
        int age = sc.nextDouble();

        if (age = 18)
            System.out.println("Exactly 18");
        else if (age > 18)
            System.out.println("Adult");
        else
            System.out.println("Teenager");

    }
}
```

double

==

Q2: Whatis the Output?

```
public class Test {

    public static void main(String[] args) {

        int x = 5;
        System.out.println(x++);
        System.out.println(++x);
        System.out.println(x);

    }
}
```

Q2: Answer?

```java
public class Test {

    public static void main(String[] args) {

        int x = 5;
        System.out.println(x++);
        System.out.println(++x);
        System.out.println(x);

    }
}
```

`x++` → prints 5, then x becomes 6

`++x` → increases first → x becomes 7, prints 7

prints current x → 7

Output
5
7
7

Q3. Identify the Type & Final Value

```java
public class Test {
    public static void main(String[] args) {

        byte a = 10;
        int b = 20;
        double c = a + b;
        int d = (int) 9.99;

        System.out.println(c);
        System.out.println(d);

    }
}
```

Q3. Answer

```
public class Test {
    public static void main(String[] args) {

        byte a = 10;
        int b = 20;
        double c = a + b;
        int d = (int) 9.99;

        System.out.println(c);
        System.out.println(d);

    }
}
```

Output

30.0

9

Q4. Predict the Output

```
public class Test {
    public static void main(String[] args) {

        int a = 10, b = 15, c = 20;

        if (a < b && b < c)
            System.out.println("A");
        if (a < b || b > c)
            System.out.println("B");
        if (!(a > b))
            System.out.println("C");

    }
}
```

Q4. Answer

```java
public class Test {
    public static void main(String[] args) {

        int a = 10, b = 15, c = 20;

        if (a < b && b < c)
            System.out.println("A");
        if (a < b || b > c)
            System.out.println("B");
        if (!(a > b))
            System.out.println("C");

    }
}
```

a < b && b < c → true → prints A

a < b || b > c → true → prints B

!(a > b) → !(false) → true → prints C

Q5. What is the output?

```
public class Test {
    public static void main(String[] args) {

        int level = 2;

        switch(level) {

            case 1:
            System.out.println("Beginner");

            case 2:
            System.out.println("Intermediate");

            case 3:
            System.out.println("Advanced");

           default:
           System.out.println("Done");

        }

    }
}
```

Q5. Answer?

```
public class Test {
    public static void main(String[] args) {

        int level = 2;

        switch(level) {

            case 1:
            System.out.println("Beginner");

            case 2:
            System.out.println("Intermediate");

            case 3:
            System.out.println("Advanced");

           default:
           System.out.println("Done");

        }

    }
}
```

Output

Intermediate
Advanced
Done

Q6. What is the output?


```
char c = 'A';
int x = c + 1;

System.out.println(c);
System.out.println(x);
```

Q6. Answer

```
char c = 'A';
int x = c + 1;

System.out.println(c);
System.out.println(x);
```

'A' = 65

c + 1 → 65 + 1 = 66

Output
A
66

Q7. What is the output?

```
public class Test {
    public static void main(String[] args) {

        int a = 10, b = 20, c = 5;

        int result = a > b ? a : b > c ? b : c;

        System.out.println(result);

    }
}
```

Q7. What is the output?

```
public class Test {
    public static void main(String[] args) {

        int a = 10, b = 20, c = 5;

        int result = a > b ? a : b > c ? b : c;

        System.out.println(result);

    }
}
```

a > b → false

Evaluate (b > c ? b : c)

20 > 5 → true → result = 20

Q8. What is the output?

```java
import java.util.Scanner;

public class activity {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner sc = new Scanner(System.in);

        int age = sc.nextInt();

        String name = sc.nextLine();

        System.out.println("name is "+name);

    }

}
```

Input
20
Ali

Q8. Answer

```java
import java.util.Scanner;

public class activity {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner sc = new Scanner(System.in);

        int age = sc.nextInt();

        String name = sc.nextLine();

        System.out.println("name is "+name);

    }

}
```

Input
20
Ali

nextInt() reads 20

But it leaves ENTER in buffer

nextLine() reads leftover ENTER

So name becomes empty string ""

```java
import java.util.Scanner;

public class activity {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner sc = new Scanner(System.in);

        int age = sc.nextInt();
        sc.nextLine();
        String name = sc.nextLine();

        System.out.println("name is "+name);

    }

}
```

Explanation

You only need nextLine() to clear the buffer **when you use nextLine() AFTER nextInt() or nextDouble()**.

If your code read :

1-nextLine() reads the entire line (including the Enter key).
2- nextInt() reads only the number.
3-nextDouble() reads only the number.

Since nextLine() comes first, there is no leftover newline problem.

When Does the Problem Happen?

If you reverse the order:

```
int age = myObj.nextInt();
String name = myObj.nextLine();
```

nextInt() reads 20
It leaves the Enter (\n) in the buffer
nextLine() reads that leftover Enter
So name becomes empty string ""


Thank You