

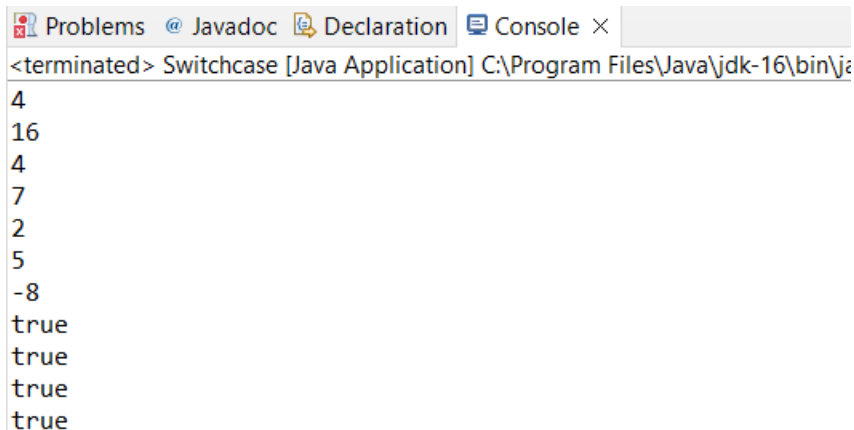
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JAVA ASSIGNMENT

Q1.

```
public static void main(String[] args) {  
    int n = 8;  
    // Shift  
    System.out.println(n >> 1);           // Signed Right Shift by 1  
    System.out.println(n << 1);           // Signed Left Shift by 1  
    System.out.println(n >>> 1);          // Unsigned Shift  
  
    int a = 3;  
    int b = 6;  
    int c = 7;  
    // Bitwise Operators;  
    System.out.println(a | b);             // Bitwise OR  
    System.out.println(a & b);             // Bitwise AND  
    System.out.println(a ^ b);             // Bitwise XOR  
    System.out.println(~c);               // Bitwise Compliment  
  
    // Relational Operators;  
    int d = 7;  
    int e = 5;  
    int f = 7;  
    System.out.println(d==f);  
    System.out.println(d!=e);  
    System.out.println(d>e);  
    System.out.println(d>=f);  
}
```



The screenshot shows an IDE window with tabs for Problems, Javadoc, Declaration, and Console. The Console tab is active, displaying the output of the Java program. The output consists of 12 lines: 4, 16, 4, 7, 2, 5, -8, true, true, true, true, and true. The first four lines correspond to the shift operations, and the next eight lines correspond to the bitwise and relational operations.

```
<terminated> Switchcase [Java Application] C:\Program Files\Java\jdk-16\bin\ja  
4  
16  
4  
7  
2  
5  
-8  
true  
true  
true  
true
```

Q2.

```
public static void main(String[] args) {
    Scanner sc= new Scanner(System.in);
    int n=sc.nextInt();
    int count=0;
    for(int i=2;i<=Math.sqrt(n);i++)
    {if(n%i==0)
        count++;
    }
    if(count==0)
        System.out.println(n+" is a prime number");
    else
        System.out.println(n+" is not a prime number");
    }
}
```

29

29 is a prime number

30

30 is not a prime number

Q3.

```
public static void main(String[] args) {
    Scanner sc= new Scanner(System.in);
    int n=sc.nextInt();
    if(n%4==0)
    {if (n%100 == 0 && n%400!=0 )
        System.out.println(n+" is not a leap year");
    else
        System.out.println(n+" is a leap year");
    }
    else
    {System.out.println(n+" is not a leap year");
    }
}
```

1900

1900 is not a leap year

2000

2000 is a leap year

1984

1984 is a leap year

Q4.

```
public static void main(String[] args) {  
  
    int sum=0;  
    for( int i=1;i<=10;i++)  
        {sum+=i;}  
    System.out.println("The sum of the first 10 numbers is "+sum);  
}
```

The sum of the first 10 numbers is 55

Q5.

```
package Switch;  
  
public class Switchcase {  
  
    public static void main(String[] args) {  
        int month = 11;  
        String name = "";  
  
        switch(month) {  
            case 1:  
                name = "January";  
                break;  
            case 2:  
                name = "February";  
                break;  
            case 3:  
                name = "March";  
                break;  
            case 4:  
                name = "April";  
                break;  
            case 5:  
                name = "May";  
                break;  
            case 6:  
                name = "June";  
                break;  
            case 7:  
                name = "July";  
                break;  
            case 8:  
                name = "August";  
                break;  
            case 9:  
                name = "September";  
                break;  
            case 10:  
                name = "October";  
                break;  
            case 11:  
                name = "November";  
                break;  
            case 12:  
                name = "December";  
                break;  
        }  
    }  
}
```

```
        case 8:
            name = "August";
            break;
        case 9:
            name = "September";
            break;
        case 10:
            name = "October";
            break;
        case 11:
            name = "November";
            break;
        case 12:
            name = "December";
            break;
        default: System.out.println("Enter a valid month between 1 and 12.");
    }

    System.out.println(name);
}
```

November