

MA144: Problem Solving and Computer Programming

Lecture-15

Class Test-1 paper discussion (cond...),

const **modifier**

8. Find out the output of the following program.

```
int main()
{
    char sym='345';
    int a=sym, b, x=20, y=10;
    b=a%x++ +a/y+a-x+2*++y;
    cout<<b;
    return 0;
}
```

```
int main()
{
char s='abcde', let;
cout<<s<<endl;
cout<<"enter string\n";
cin>>let;
cout<<let;
return 0;
}
```

```
e
enter string
abcde
a
```

9. Find out the output of the following program.

```
int main()
{
    int n = 10, count = 0, sum = 0;
    while(--n > 0)
    {
        n /= 2;
        count++;
        sum +=n;
    }
    cout<<n<<' '<<count<<' '<<sum;
    return 0;
}
```

10. Find out the output of the following program.

(program uses nested ternary operation)

```
int main()
{
    int a=-2, b=10, c=4, d=5;

    (a > 0 && b < 0) || (a < 0 || b > 0)?
    ((a > 0 && b < 0) || (a < 0 && b ==0))?
    cout<<d-a+5%a    : cout<<b*a/b/c+a)
    : cout<<64/8%7+a-b+d;
    return 0;
}
```

11. Find out the output of the following program.

```
int main()
{int y, x=096.5;
  do {
    y=x%10;
    cout<<y;
  } while((x = x/10) != 0);
  return 0;
}
```

12. Find out the output of the program.

```
int main()
{
    int i;
    for (i = 0; i < 20; i++)
    {
        switch (i) {
            case 0: i += 5;
            case 1: i += 2;
            case 5: i += 5;
            default: i += 4;
            break;
        }
        cout<<i<<' ';
    }
    return 0;
}
```

13. How many times **section C** will be printed by the following program?

```
int main(){
    int num = 5; int num2 = 1;
    while (num2 < 4)
    {
        for ( ; num >= num2 ; num-- )
            cout<<"section C"<<endl;
        num2++;
    }
    return 0;
}
```


14. Find out the output of the following program.

```
int main(){  
    int x;  
    cout<< (x=x = 2 && 3 > 4);  
    return 0;  
}
```

```
#include<iostream>
using namespace std;
```

```
int main()
{   int x=y=2;
    cout<<x;
    return 0;
}
```

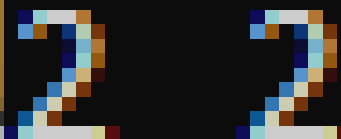
[Error] 'y' was not declared in this scope

```
#include<iostream>
using namespace std;
```

```
int main()
{
    int x=x=2;
    cout<<x;
    return 0;
}
```

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```
#include <iostream>
using namespace std;
int main()
{   int y;
    int x=y=2;
    cout<<x<<" "<<y;
    return 0;
}
```



2 2

Naming Constants with the `const` Modifier

Syntax

```
const Data_type VARIABLE_NAME = Constant;
```



Use uppercase letters

Examples

```
const int SUM = 10;  
const double PI = 3.14, T=5.12;
```

```
#include <iostream>
using namespace std;
int main()
{
    const int SUM=10, M=100;
    cout<<SUM<< ' ' <<M;

    return 0;
}
```

A terminal window with a black background and a light gray title bar. The text "10 100" is displayed in a yellow, monospaced font. The first "10" is followed by a space, and then "100".

10 100

```
#include <iostream>
using namespace std;
int main()
{
    const int SUM;
    int x=100;
    SUM=x;
    cout<<SUM;

    return 0;
}
```

[Error] uninitialized const 'SUM' [-fpermissive]

```
#include <iostream>
using namespace std;
int main()
{
    int x=100;
    const int SUM=x;
    cout<<SUM;

    return 0;
}
```

```
100
```



```
#include <iostream>
using namespace std;
int main()
{
    int x=100;
    const int SUM=x/9;
    cout<<SUM;

    return 0;
}
```

11

```
#include <iostream>
using namespace std;
int main()
{
    int x=100;
    const int SUM=x/9;

    SUM=x+5;
    cout<<SUM;

    return 0;
}
```

[Error] assignment of read-only variable 'SUM'