

If else ,ternary & switch

Lecture- 4

Raghav Garg

COLLEGE
WALLAH

Control Statements

(continued)

COLLEGE
WALLAH

Predict the output

```
#include<iostream>
using namespace std;
int main() {
    int x = 10, y = 20 ;
    if (x == y) ;
        cout << x << " " << y ;
    return 0;
}
```

Output

10 20

Predict the output

```
int main() {
    int x = 3, y = 5 ;
    if (x == 3)
        cout << x << endl;
    else ;
        cout << y << endl;
    return 0;
}
```

Output

3
5
.

Unary

Binary

Ternary

→ Cool banne

→ if-else compact

Ternary Operator

expression 1 ? expression 2 : expression 3

condition ? true : false

COLLEGE
WALLAH

Ques : Given the marks of the student. If the marks are greater than 33 print the result as pass otherwise fail without using if-else statement.

```
int marks ;  
cin >> marks ;  
if (marks > 33) cout << "Pass",  
else cout << "Fail";
```

COLLEGE
WALLAH

* Predict the output

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

```
✓ int main(){
    ✓ char x;
    ✓ int a = 2;
    ✓ x = (a > 0) ? 'a' : 'S';
    ✓ cout << "Value of x : " << x << endl;
    ✓ cout << "Value of a : " << a;
    return 0;
}
```



Output

• Value of x : a
• Value of a : 2

```
int x;  
int y = 3;  
if (y > 4)  
    x = 1;  
else  
    x = 2;
```

COLLEGE
WALLAH

Predict the output

```
int main(){
```

```
    ✓int x;
```

```
    ✓x = 5 > 8 ? 10 : 1 != 2 < 5 ? 20 : 30;
```

```
    ✓cout<<"Value of x : "<<x;
```

```
    return 0;
```

```
} Output
```

Value of x : 30

30

x

30

1 != 2 < 5

↓

1 < 5

↓

1

1 != 2 < 5

↓

1 != 1

↓

0

Predict the output

```
int main(){
    int test = 0;
    float f = 3.111;
    cout << (test > 0 ? f : 0) << endl;
    return 0;
}
```

0
test

3.111
f

Output

0

COLLEGE
WALLAH

Switch Statement



alternative of if - else statement

Syntax

```
switch ( integer expression ) {
    case constant 1:
        do this ;
    case constant 2:
        do this ;
    case constant 3:
        do this ;
    default :
        do this ;
}
```

```
switch ( x ) {
    case 1 :
        cout << "Ok";
    case 2 :
        cout << "Hello";
    case 3 :
        cout << "Bye";
}
```

Ques : Write a program to input week number(1-7) and print day of week name using switch case.

1 → Monday

2 → Tues

3 → Wed

4 → Thurs

5 → Fri

6 → Sat

7 → Sun

COLLEGE
WALLAH

Ques : Write a program to input month number and print total number of days in month using switch case.

1 → Jan → 31

2 → Feb → 28

3 → March → 31

4 → April → 30

5 → May → 31

6 → June → 30

7 → July → 31

```
switch (condition) {  
    case 1:  
        do this  
}
```

COLLEGE
WALLAH

✖

Ques : Write a program to create a calculator that performs basic arithmetic operations (add, subtract, multiply and divide) using switch case and functions. The calculator should input two numbers and an operator from user. $+, -, *, /$

```
int a, b;  
cin >> a >> b;  
  
char ch;  
cin >> ch;
```

COLLEGE
WALLAH

Predict the output

```
int main() {
```

```
    ✓ int x = 3, y, z ;
```

```
    ✓ y = x = 10 ;
```

```
    ✓ z = x < 10 ;
```

```
    ✓ cout << "x = " << x << "y = " << y << "z = " << z ;
```

```
    return 0;
```

```
}
```



output

x = 10 y = 10 z = 0

Predict the output

```
#include<iostream>

using namespace std;

int main( ) {
    ✓ int k = 35 ;
    ✓ cout <<( k == 35) <<endl << (k == 50) <<endl << (k > 40 ) ;
    return 0;
}
```

35
k

Output

- 1
- 0
- 0

COLLEGE
WALLAH

Predict the output

```
#include<iostream>

using namespace std;

int main( ) {
    ✓int k = 35 ;
    ✓cout <<( k == 35) <<endl << (k == 50) <<endl << (k > 40 ) ;
    return 0;
}
```

50
35
k

Output

• 1
• 50
• 1

COLLEGE
WALLAH

Predict the output

```
#include<iostream>
using namespace std;
int main( ) {
    int i = 65 ;
    char j = 'A' ;
    if ( i == j )
        cout << "P stands for PhysicsWallah" ;
    else
        cout<<"P stands for pwskills" ;
    return 0;
}
```

65 'A'
i j

Output-

P stands for PW

The Real Thing:

```
if ( 3 + 2 % 5 )
    cout << "This works" && endl;
if ( a = 10 )
    cout << "Even this works" && endl;
if ( -5 )
    cout << "Surprisingly even this works" && endl;
```

Output

- This works
- Even this works
- Surprisingly even this works

The Real Thing:

```
if ( condition )  
    statement ;
```

```
if ( expression )  
    statement ;
```

COLLEGE
WALLAH

THANK YOU

Loops , Loops , PP-1 , PP-2
 ↓
 Problems

COLLEGE
WALLAH