

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

```
int main() {
```

```
    char c;
```

```
    c = 'A'; // ASCII
```

```
    cout << (int)c << endl; // A
```

```
    return 0;
```

```
}
```

variable declaration

65 ← c

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

```
int main() {
```

```
    int val;
```

```
    cout << "Enter value: ";
```

Enter value: _

```
    cin >> val;
```

```
    cout << "Val was : " << val << endl;
```

```
    return 0;
```

```
}
```

```
bool p;
```

```
p = true;
```

```
p = false;
```

0 → false
Everything else → true

- Data storage ✓

- Iteration

- Decisions ✓

```
int age = 16;
```

```
if ( age >= 18 ) {
```

```
    cout << "You can vote" << endl;
```

```
} else {
```

```
    cout << "You are safe" << endl;
```

```
}
```

x — x

```
→ char grade = 'B';
```

```
float points = 0.0;
```

```
① if ( grade == 'A' )
```

```
    points = 4.0;
```

```
① else if ( grade == 'B' )
```

```
    points = 3.0;
```

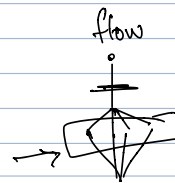
```
else if ( grade == 'C' )
```

```
    points = 2.0;
```

```
else
```

```
    points = 0.0;
```

```
if ①  
else
```



```
cout << points;
```

```
if highest priority
```

```
elseif x
```

```
elseif
```

```
else
```

if-else-if ladder

```
if ( 2 )  
else 3
```

char grade = 'B'; ✓ float points = 0.0; ✓
 switch (grade) { (not recommended)

① case 'A' : → points = 4.0 ;
 break; ✓

② case 'B' : points = 3.0 ;
 break; ✓

case 'C' : points = 2.0 ;
 break; ✓

default : points = 0.0 ;

}

→ cout << points ; 0.0

switch (grade) {

case '+' :
 case 'A' : p = 4.0 ; ✓
 break; ✓

case 'B' :

case 'C' :

default :

}

— Iterations: → init

int i = 0 ;
 while (i <= 5) { → stopping condition

step → i += 1 ; // i++
 cout << i << endl; → body

}

— i 5

1	0
2	1
3	2
4	3
5	4

i
5

for loop

① initialization
② stopping condition.
③ step
④ ⑤ ⑥ ⑦ ⑧ ? false

for (int i=0 ; i<=5 ; i++) { → ③ ⑥ } $i++ \Rightarrow i+=2$

→ if (i == 2) {
 //continue ; // skip this iteration only.
 break ; // exit loop body completely

count << i << endl; X

⑨

0
1
3
4
5

function's local variable

int i=0;

① for (i = 0 ; i<5 ; i++) {
 }
 → i = 5

i ⑤

② for (int i=0 ; i<5 ; i++) { } scope of i
 }
 i → error