10/16/19

int main ()

{

…

int choice;

cin >> choice

if (choice == 1)

…

else if (choice == 2 || choice == 4)

…

else

{

cout << “Choice must be 1 through 5. Goodbye.” << endl;

return 1;

}

…

}

Another statement

switch (choice)

{

case 1:

…

break;

case 2:

case 4:

…

break;

case 3:

case 5:

…

break;

default:

cout << “Choice must be 1 through 5. Goodbye.” << endl;

return 1;

}

break ~ else if

no break -> another if

default ~ else

Checking against a constant

Cannot condition with variable outside the switch statement -> need to list individual statement

How many times do you want to be greeted? *3*

Hello

Hello

Hello

cout << How many times do you want to be greeted? “;

int nTimes;

cin >> nTimes;

if (nTimes >= 1)

….

if (nTImes >= 2)

…

…

OR

int n = 0;

while (n < nTimes)

{

cout << “Hello” << endl;

n = n+1;

}

if (*condition*)

statement

…

while (*condition*)

statement

…

nTimes = 3, n = 0

0 < 3, Hello, n: 0 -> 1

1 < 3, Hello, n: 1 -> 2

2 < 3, Hello, n: 2 -> 3

3 !< 3 -> break loop

Assignment -> add one to variable

Ex:

n = n \* 2; n \*= 2; -> -=, +=, /=

n++ or ++n -> add one to n

n-- or –n -> minus one to n

off-by-one error -> incorrect conditions (additional or one less printed)

Always do the statement at least once (do-while loop)

do {

*statement*

} while ();

Be careful of misinterpreting the end of while (); -> new loop?  
- check with while ();

count variable

Another way: for loop

for (int n = 0; n < nTimes; n+)

cout << “Hello” << endl;

for (*initialization*; *stay-in-loop* condition; *prepare-for-next-iteration)*

*statement*

Check condition first before running the code -> run the code -> next iteration -> check statement -> continues

Declaration of new variable -> only in that for-loop (local variable)

for (int n = 10; n >= 0; n--)

cout << n << endl;

for (int m = 1; m < 1000; m \*= 2)

cout << n << endl;

Choose a for loop when prepare-for-next iteration is simple -> related to the stay-in-loop condition

for (int r = 1; r <= 3; r++) {

for (int c = 1; c <= 4; c++) {

cout << “\*”;

}

cout << endl;

}

string s = “Hello”;

for (int k = 0; k != s.size(); k++)

{

cout << s[k] << endl;

}

Enter some texts: *Everyone, hello!*

The number of E’s (upper and lower case) is *4*

#include <iostream>

#include <string>

using namespace;

int main ()

{

cout << “Enter some texts: “;

string s;

getline(cin, s);

int eAmt;

for (int i = 0; i != s.size(), i++)

{

if (s[i] == ‘e’ || s[i] == ‘E’)

eAmt++;

}

cout << “The number of E’s (upper and lower case) is “ << eAmt << endl;

}