**C++**

**BASIC STRUCTURE**

#include <iostream>

#include <string>

#include <windows.h>

#include <random>

#include <ctime>

using namespace std;

int main(){

system(“pause”);

return 0;

}

return 0

cout << “hello world”;

cin >> variable name;

**COMMENTS**

/\* \*/ - multiline

// - single line

**RANDOM NUMBER GENERATOR**

srand(time(NULL));

rand() % 10;

default\_random\_engine randomName(time(0));

uniform\_int\_distribution<int> rollName(1, 99);

uniform\_real\_distribution<float> floatName(0.0f , 1.0f);

rollName(randomName);

**VARIABLE TYPES**

integer

float

double

characters

Boolean

string

arrays

example of an array:

const int arraySize = 3;

string arrayName[arraySize] = { “item01” , “item02” , “item03” };

**ARITHMETIC OPERATORS**

addition , subtraction , multiplication and division

+ , - , \* and /

% - modulo

-- and ++ increment and decrement increases or decreases integer value by one

assume that x and y are variavles

**RELATIONAL OPERATORS**

== , != , > , < , >= , <=

**FUNCTIONS**

variablename.lenght()

int functionName( int variableOne , int variableTwo ){

cout << “use int if you have return value”;

return variableReturn

}

void functionName(int variableOne , int variableTwo ){

cout << “use if you just want to cout something”;

}

**STATEMENTS**

IF ELSE

if( true ){

cout << “do this code” << endl;

}else if(true){

cout << “do this code instead” << endl;

}else{

cout << “and if everything is wrong do this code instead” << endl;

}

**LOOPS**

WHILE

while(true) {

if(true)

break;

cout << “do this code” << endl;

}

FOR

for( int i = 1 ; I <= 10 ; i++){

cout << “number ” << I << endl;

}

DO WHILE

do {

cout << “do this code” << endl;

} while(true)