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Programming C++ I

Fall 2015

While Loops Written Assignment

1**. How many times does the following loop execute, and what is its output?**

count = 1;

while (count <= 12)

{

cout << count << endl;

count++;

}

This loop executes 12 times and its output looks like this:



2. **How many times does the following loop execute, and what is its output?**

count = 0;

while (count <= 11)

{

cout << count << ", ";

count++;

}

The following loop executes 12 times and its output looks like this:



3. How many times does the following loop execute, and what is its output?

count = 1;

while (count < 13)

{

cout << "$ " << count << ".00" << endl;

count++;

}

The following code executes 12 times and the output looks like this:



4. **The following code segment is supposed to output the average of the 5 numbers input by the user. Instead, it simply outputs the sum of all the numbers. What's wrong with the code segment? Change the code so that it works correctly.**

sum = 0;

count = 5;

while (count > 0)

{

numbers\_entered = 1;

cin >> number;

sum += number;

count--;

}

answer = sum / numbers\_entered;

cout << answer << endl;

//CORRECTED CODE BELOW W/ PICTURE

#include <iostream>

#include <iomanip>

#include <string>

using namespace std;

int main()

{

int sum = 0;

int count = 5;

int numbers\_entered=0;

int number;

float answer;

while (count > 0)

{

cout << "Input an integer: ";

numbers\_entered++;

cin >> number;

sum += number;

count--;

}

answer = (float)sum / (float)numbers\_entered;

cout << answer << endl;

return 0;

}



**5. Write a code segment using a "while" loop that outputs the numbers from -10 to 10.**

#include <iostream>

#include <iomanip>

using namespace std;

int main ()

{

int count=10,

x=-10;

while (x <= 0)

{

cout << x << endl;

x++;

}

while (count >= 1)

{

cout << count << endl;

count-- ;

}

{

return 0;

}

}



6. **Write a code segment that asks a user to enter a number between 0 and 100, inclusive. The input should be done in a "while loop" that repeats if the user enters a value outside the requested range.**

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

int num=101;

while (num>100 || num <0)

{

cout << "Enter an integer between 0 and 100 inclusive: ";

cin >> num;

}

cout << "Nice job!";

return 0;

}

// the program ends with a kind statement if the number entered is in the correct range.





7. **Write a code segment that uses a while loop to have the user enter values. The loop should stop when the user types in -1.**

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

int num=3.14159;

while (num!= -1)

{

cout << "Enter any integer value: ";

cin >> num;

}

cout << "Goodbye dear Intergalactic Alien!";

return 0;

}



8. **Write a code segment that will let the user repeat a loop a number of times entered by the user. The code block in the loop will print out the values of the variable keeping track of how many times the loop has been executed.**

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

int numLoops; // user inputs number of loops

cout << "Enter the number of loops to be excuted: \n";

cin >> numLoops;

for (int i=1; i <= numLoops; i++)

{

cout << "We are on loop: " << i << ".\n\n";

}

cout << "Thanks you chapped lips!";

return 0;

}



9. **Write a code segment that will loop forever, unless the user enters a 'q' to quit the loop. Set up a char variable outside the loop to handle the loop control. Inside the loop, include a cout / cin combination to ask the user if the loop should be repeated.**

#include <iostream>

#include <iomanip>

#include <string>

using namespace std;

int main()

{

bool running = true;

std::string input="Repeat";

std::string exit;

while (running)

{

cout << "enter q to quit if you're not interested in a joke: \n\n";

cout << "Peet and Repeat went into the store.\nPeet came out,\nwho was left?\n";

cin >> input;

if (input=="q" || (input != "Repeat" && input != "repeat"))

{

running=false;

}

}

if (input=="q")

{

printf("\n Too bad, you missed a gnarly joke");

}

else

{

printf ("Good choice skipper!");

}

return 0;

}