*Repetition Statements*

Complete the following exercises by the due date. Make sure your source code using appropriate programming style (e.g., descriptive variable names, indenting, comments, etc.).

***Exercises***

1. Write a program that allows you to enter a series of ages for a group of friends.  Use a age of -1 as the sentinel (stop value).  Output the average age and the number of friends.
2. /\*
3. Homework: Elementary Programming
4. Programmer: Idonel Louidor
5. Description: 1. Write a program that allows you to enter a series of ages for a group of friends. Use a age of -1 as the sentinel (stop value). Output the average age and the number of friends.
6. \*/
7. //Libraries
8. #include <iostream>
9. using namespace std;
10. // main code input
11. int main()
12. {
13. int age=0;
14. double ave;
15. double sum=0;

18. // using while loop to generate age from user number input
19. while (age !=-1)
20. {
21. cout << "Enter age " << endl;
22. cin >> age;
24. //add counter and add total
25. sum = age + sum;
26. age +=1;
28. // calculating the average of total age inputed by the user.
29. }
30. ave = sum / age;
31. cout << "the age Average is: " << ave << " \n\ntotal of friend" << age << endl;
33. system("pause");
34. }

A screenshot of a cell phone

Description automatically generated

Using a **nested for()** loop, write a program that prints out the following pattern. Each output statement must be cout << “\*”;

/\*

1. Homework: Elementary Programming
2. Programmer: Idonel Louidor
3. Description: Using a nested for() loop, write a program that prints out the following pattern. Each output statement must be cout << “\*”;
4. \*/
5. //Libraries
6. #include <iostream>
7. using namespace std;
8. // main code input
9. int main()
10. {
11. int row =1;
12. int column =1;
14. // using for loop to generate row of pattern in "\*"
15. for (row =1; row <=4; row++)
16. {
17. // using for loop to creat number of column
18. for (column = 1; column <= row; column++)
19. {
20. cout << "\*";
21. }
22. cout << endl;
23. }
25. //end of code
26. system("pause");
27. }

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1. Write a program using a for() loop that produces a conversion table from Fahrenheit to Celsius for temperatures ranging from 30 to 100 degrees, at increments of 10 (e.g. 30, 40, 50, etc.) Fahrenheit.
2. /\*
3. Homework: Elementary Programming
4. Programmer: Idonel Louidor
5. Description: 32. Write a program using a for() loop that produces a conversion table from Fahrenheit to Celsius for temperatures ranging from 30 to 100 degrees, at increments of 10 (e.g. 30, 40, 50, etc.) Fahrenheit.
6. \*/
7. //Libraries
8. #include <iostream>
9. using namespace std;
10. int main()
11. {
12. //using varibles to storing user input
13. double cels;
14. int fahr;
16. // user temp input
17. cout << "enter a fahrenheit temperature to convert to celsius:\n";
18. cin >> fahr;
19. // using for loop for user to calculate degree conversion
20. for( fahr = 30; fahr <= 100; fahr += 10)
21. {
22. //fahrenheit into celsius
23. double cels = (fahr - 32) \* 5 / 9;
24. //print out calculation of degrees conversion
25. cout <<fahr<< " degrees fahrenheit convert to " << cels<< " celsius degrees" << endl;
26. }
27. system("pause");
28. }

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Description automatically generated