C++ simple programs

* **C++** "Hello, World!" ...
* **C++ Program** to Print Number Entered by User.
* **C++ Program** to Add Two Numbers.
* **C++ Program** to Find Quotient and Remainder.
* **C++ Program** to Find Size of int, float, double and char in Your System.
* **C++ Program** to Swap Two Numbers.
* **C++ Program** to Check Whether Number is Even or Odd.

Program to add integers

#include <iostream>

using namespace std;

int main()

{

int firstNumber, secondNumber, sumOfTwoNumbers;

cout << "Enter two integers: ";

cin >> firstNumber >> secondNumber;

// sum of two numbers in stored in variable sumOfTwoNumbers

sumOfTwoNumbers = firstNumber + secondNumber;

// Prints sum

cout << firstNumber << " + " << secondNumber << " = " << sumOfTwoNumbers;

return 0;

}

Example 1: Program to print half pyramid using \*

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows;

cout << "Enter number of rows: ";

cin >> rows;

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

{

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

{

cout << "\* ";

}

cout << "\n";

}

return 0;

}

Example 2: Program to print half pyramid a using numbers

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows;

cout << "Enter number of rows: ";

cin >> rows;

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

{

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

{

cout << j << " ";

}

cout << "\n";

}

return 0;

}

Example 3: Program to print half pyramid using alphabets

A

B B

C C C

D D D D

E E E E E

**Source Code**

#include <iostream>

using namespace std;

int main()

{

char input, alphabet = 'A';

cout << "Enter the uppercase character you want to print in the last row: ";

cin >> input;

for(int i = 1; i <= (input-'A'+1); ++i)

{

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

{

cout << alphabet << " ";

}

++alphabet;

cout << endl;

}

return 0;

}

**Programs to print inverted half pyramid using \* and numbers**

Example 4: Inverted half pyramid using \*

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows;

cout << "Enter number of rows: ";

cin >> rows;

for(int i = rows; i >= 1; --i)

{

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

{

cout << "\* ";

}

cout << endl;

}

return 0;

}

Example 5: Inverted half pyramid using numbers

1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows;

cout << "Enter number of rows: ";

cin >> rows;

for(int i = rows; i >= 1; --i)

{

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

{

cout << j << " ";

}

cout << endl;

}

return 0;

}

**Programs to display pyramid and inverted pyramid using \* and digits**

Example 6: Program to print full pyramid using \*

\*

\* \* \*

\* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \* \* \* \* \*

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int space, rows;

cout <<"Enter number of rows: ";

cin >> rows;

for(int i = 1, k = 0; i <= rows; ++i, k = 0)

{

for(space = 1; space <= rows-i; ++space)

{

cout <<" ";

}

while(k != 2\*i-1)

{

cout << "\* ";

++k;

}

cout << endl;

}

return 0;

}

Example 7: Program to print pyramid using numbers

1

2 3 2

3 4 5 4 3

4 5 6 7 6 5 4

5 6 7 8 9 8 7 6 5

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows, count = 0, count1 = 0, k = 0;

cout << "Enter number of rows: ";

cin >> rows;

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

{

for(int space = 1; space <= rows-i; ++space)

{

cout << " ";

++count;

}

while(k != 2\*i-1)

{

if (count <= rows-1)

{

cout << i+k << " ";

++count;

}

else

{

++count1;

cout << i+k-2\*count1 << " ";

}

++k;

}

count1 = count = k = 0;

cout << endl;

}

return 0;

}

Example 8: Inverted full pyramid using \*

\* \* \* \* \* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \*

\* \* \*

\*

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows;

cout << "Enter number of rows: ";

cin >> rows;

for(int i = rows; i >= 1; --i)

{

for(int space = 0; space < rows-i; ++space)

cout << " ";

for(int j = i; j <= 2\*i-1; ++j)

cout << "\* ";

for(int j = 0; j < i-1; ++j)

cout << "\* ";

cout << endl;

}

return 0;

}

**Example 9: Print Pascal's triangle**

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

1 5 10 10 5 1

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows, coef = 1;

cout << "Enter number of rows: ";

cin >> rows;

for(int i = 0; i < rows; i++)

{

for(int space = 1; space <= rows-i; space++)

cout <<" ";

for(int j = 0; j <= i; j++)

{

if (j == 0 || i == 0)

coef = 1;

else

coef = coef\*(i-j+1)/j;

cout << coef << " ";

}

cout << endl;

}

return 0;

}

**Example 10: Print Floyd's Triangle.**

1

2 3

4 5 6

7 8 9 10

**Source Code**

#include <iostream>

using namespace std;

int main()

{

int rows, number = 1;

cout << "Enter number of rows: ";

cin >> rows;

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

{

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

{

cout << number << " ";

++number;

}

cout << endl;

}

return 0;

}