How to implement the DES algorithm in C++

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Data Encryption Standard (DES) (https://www.educative.io/shoteditor/6142741706702848/preview) is a block cipher algorithm that takes plain text in blocks of 64 bits and converts them to the ciphertext using 16 48-bit keys.

Implementation

1. Generating keys

The algorithm involves 16 rounds of encryption, with each round using a different key. Therefore, 16 keys are generated.

```
// Including dependancies
#include <iostream>
#include <string>
using namespace std;
// Array to hold the 16 keys
string round_keys[16];
// Function to do a circular left shift by 1
string shift_left_once(string key_chunk){
    string shifted="";
        for(int i = 1; i < 28; i++){
            shifted += key_chunk[i];
        }
        shifted += key_chunk[0];
    return shifted;
}
// Function to do a circular left shift by 2
string shift_left_twice(string key_chunk){
    string shifted="";
    for(int i = 0; i < 2; i++){
        for(int j = 1; j < 28; j++){
            shifted += key_chunk[j];
```