DATE-23 DEC 2024

Question -- write a function to add two numbers

```
#include <iostream>
using namespace std;
// Function to add two numbers
int addNumbers(int a, int b) {
  return a + b;
int main() {
  int num1, num2;
  // Input two numbers
  cout << "Enter first number: ";</pre>
  cin >> num1;
  cout << "Enter second number: ";</pre>
  cin >> num2;
  // Call the function and display the result
  int sum = addNumbers(num1, num2);
  cout << "The sum of " << num1 << " and " << num2 << " is: " << sum << endl;
  return 0;
}
```

```
Question-- create a function prime or not
#include <iostream>
using namespace std;
bool isPrime(int n) {
  if (n <= 1)
    return false;
  for (int i = 2; i * i <= n; i++) {
    if (n \% i == 0)
       return false;
  return true;
}
int main() {
  int num;
  cout << "Enter a number: ";</pre>
  cin >> num;
  if (isPrime(num))
    cout << num << " is a prime number." << endl;</pre>
    cout << num << " is not a prime number." << endl;</pre>
  return 0;
}
*/
```

```
Question-- create a function to check number is GCD
#include <iostream>
using namespace std;
int gcd(int a, int b) {
  if (b == 0)
    return a;
  return gcd(b, a % b);
}
int main() {
  int num1, num2;
  cout << "Enter two numbers: ";</pre>
  cin >> num1 >> num2;
  int result = gcd(num1, num2);
  cout << "The GCD of " << num1 << " and " << num2 << " is: " << result << endl;
  return 0;
}
*/
```

```
Question-- Iterative C++ program to reverse a linked list
#include <iostream>
using namespace std;
class Node {
public:
  int data;
  Node* next;
  Node(int new_data) {
    data = new_data;
    next = nullptr;
 }
};
Node* reverseList(Node* head) {
  Node *curr = head, *prev = nullptr, *next;
  while (curr != nullptr) {
    next = curr->next;
    curr->next = prev;
    prev = curr;
    curr = next;
  }
  return prev;
void printList(Node* node) {
  while (node != nullptr) {
    cout << " " << node->data;
    node = node->next;
  }
}
int main() {
  Node* head = new Node(1);
  head->next = new Node(2);
  head->next->next = new Node(3);
  head->next->next->next = new Node(4);
  head->next->next->next = new Node(5);
  cout << "Given Linked list:";
  printList(head);
```

```
head = reverseList(head);

cout << "\nReversed Linked List:";
 printList(head);

return 0;
}
*/</pre>
```

```
Question-- Create a function to check number is perfect or not
#include <iostream>
using namespace std;
bool isPerfectNumber(int n) {
  if (n <= 1) return false;
  int sum = 0;
  for (int i = 1; i \le n / 2; ++i) {
    if (n \% i == 0) {
       sum += i;
    }
  }
  return sum == n;
}
int main() {
  int number;
  cout << "Enter a number: ";</pre>
  cin >> number;
  if (isPerfectNumber(n0umber)) {
    cout << number << " is a perfect number." << endl;</pre>
    cout << number << " is not a perfect number." << endl;</pre>
  }
  return 0;
*/
```

```
Question -- reverse a string in c++
#include <iostream>
#include <string>
using namespace std;
string reverseString(const string& input) {
  string reversed = input;
  int n = reversed.length();
  for (int i = 0; i < n / 2; ++i) {
    swap(reversed[i], reversed[n - i - 1]);
  }
  return reversed;
}
int main() {
  string str = "Hello, World!";
  cout << "Original String: " << str << endl;</pre>
  cout << "Reversed String: " << reverseString(str) << endl;</pre>
  return 0;
}
*/
```