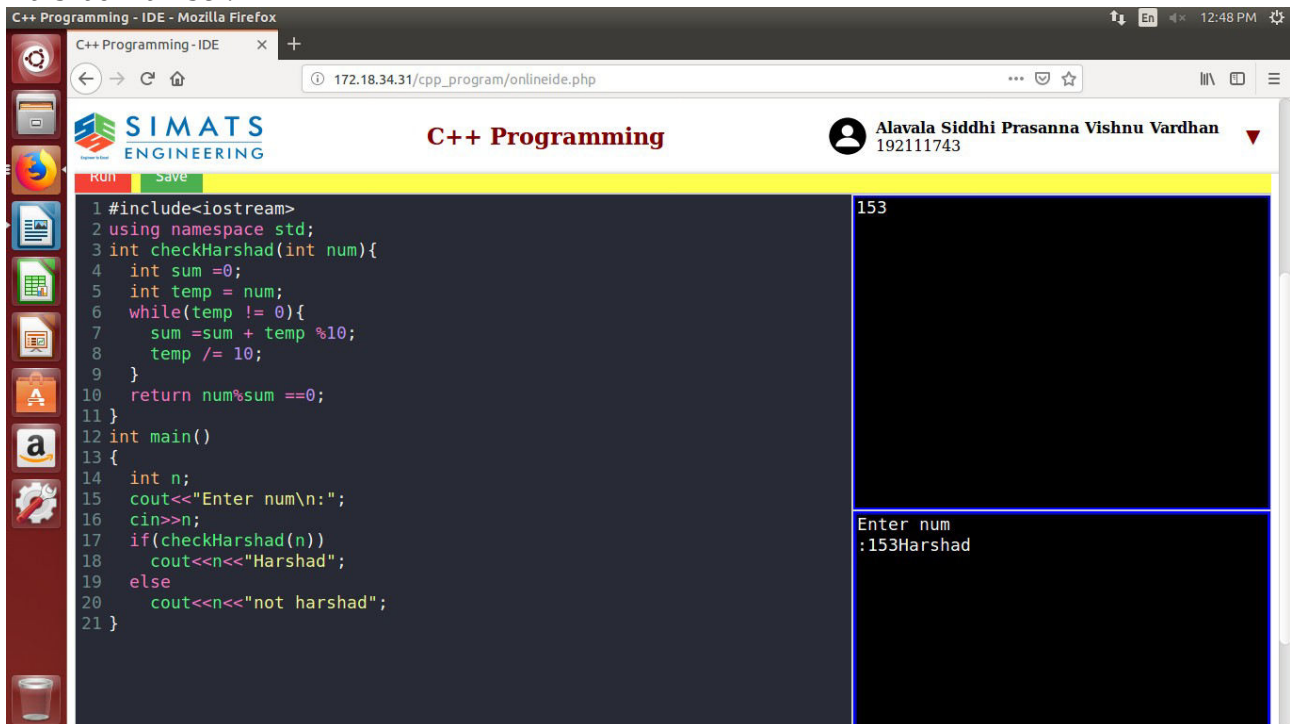


Harshad Number:



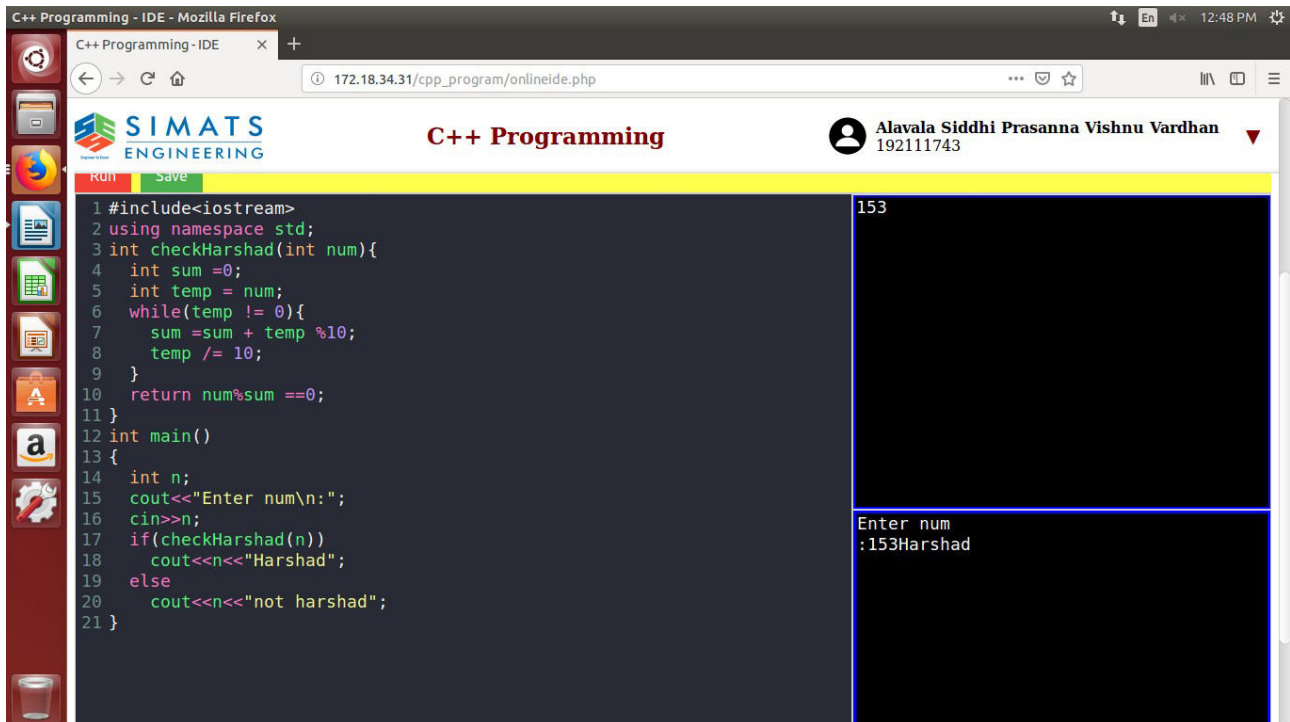
The screenshot shows a web-based C++ IDE interface. The browser address bar displays '172.18.34.31/cpp_program/onlineide.php'. The page header includes the 'SIMATS ENGINEERING' logo, the title 'C++ Programming', and a user profile for 'Alavala Siddhi Prasanna Vishnu Vardhan' with ID '192111743'. The IDE has a 'Run' button highlighted in yellow. The code editor contains a C++ program to check if a number is a Harshad number. The program defines a function 'checkHarshad' that calculates the sum of digits and checks if the number is divisible by that sum. The 'main' function prompts the user to enter a number. The output window shows the input '153' and the result ':153Harshad'.

```
1 #include<iostream>
2 using namespace std;
3 int checkHarshad(int num){
4     int sum =0;
5     int temp = num;
6     while(temp != 0){
7         sum =sum + temp %10;
8         temp /= 10;
9     }
10    return num%sum ==0;
11 }
12 int main()
13 {
14     int n;
15     cout<<"Enter num\n:";
16     cin>>n;
17     if(checkHarshad(n))
18         cout<<n<<"Harshad";
19     else
20         cout<<n<<"not harshad";
21 }
```

153

Enter num
:153Harshad

Fibonacci:



This screenshot is identical to the one above, showing the same C++ IDE interface and Harshad Number program. The code, output, and user information are the same as in the first image.

```
1 #include<iostream>
2 using namespace std;
3 int checkHarshad(int num){
4     int sum =0;
5     int temp = num;
6     while(temp != 0){
7         sum =sum + temp %10;
8         temp /= 10;
9     }
10    return num%sum ==0;
11 }
12 int main()
13 {
14     int n;
15     cout<<"Enter num\n:";
16     cin>>n;
17     if(checkHarshad(n))
18         cout<<n<<"Harshad";
19     else
20         cout<<n<<"not harshad";
21 }
```

153

Enter num
:153Harshad

Swapping:

The screenshot shows a web-based C++ IDE interface. The browser address bar displays the URL `172.18.34.31/cpp_program/onlineide.php`. The page header includes the SIMATS ENGINEERING logo, the title "C++ Programming", and a user profile for "Alavala Siddhi Prasanna Vishnu Vardhan" with ID "192111743". Below the header, there are buttons for "Arithmetic" and "Average". The main editor area contains a C++ program for swapping two numbers. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int a=5,b=10,s;
5     cout<<"Before Swapping";
6     cout<<"a="<<a<<" ,b="<<b;
7     s=a;
8     a=b;
9     b=s;
10    cout<<"After swapping";
11    cout<<"a="<<a<<" ,b="<<b;
12 }
```

On the right side of the IDE, there is a text area with the instruction: "Your INPUT go's here! Give only values. do not give like a=10". Below this, the output of the program is displayed: "Before Swappinga=5,b=10After swappinga=10,b=5".

Area of Circle:

The screenshot shows the same web-based C++ IDE interface. The browser address bar displays the URL `172.18.34.31/cpp_program/onlineide.php`. The page header includes the SIMATS ENGINEERING logo, the title "C++ Programming", and a user profile for "Alavala Siddhi Prasanna Vishnu Vardhan" with ID "192111743". Below the header, there are buttons for "Run" and "Save". The main editor area contains a C++ program to calculate the area of a circle. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     float pi=3.4,r,a;
5     cout<<"Enter Radius:\n";
6     cin>>r;
7     a=pi*(r*r);
8     cout<<"Area is:"<<a;
9 }
```

On the right side of the IDE, there is a text area with the instruction: "12". Below this, the output of the program is displayed: "Enter Radius: Area is489.6".

Factorial:

C++ Programming - IDE - Mozilla Firefox

172.18.34.31/cpp_program/onlineide.php

SIMATS ENGINEERING **C++ Programming** Alavala Siddhi Prasanna Vishnu Vardhan 192111743

Run Save

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int n,s=1;
5     cout<<"Enter number:\n";
6     cin>>n;
7     for(int i=1;i<=n;i++){
8         s*=i;
9     }
10    cout<<"Factorial of"<<n<<"="<<s;
11 }
```

6

Enter number:
Factorial of 5: 120

Largest Among three:

Online C++ Compiler - Mozilla Firefox

https://www.programiz.com/cpp-programming/online-compiler/

Programiz C++ Online Compiler

C++ Certification

main.cpp Run Output Clear

```
1 #include <iostream>
2 using namespace std;
3 int main() {
4     double n1, n2, n3;
5     cout << "Enter three numbers: ";
6     cin >> n1 >> n2 >> n3;
7     if(n1 >= n2 && n1 >= n3)
8         cout << "Largest number: " << n1;
9     else if(n2 >= n1 && n2 >= n3)
10        cout << "Largest number: " << n2;
11     else
12        cout << "Largest number: " << n3;
13 }
```

/tmp/Fjnt3LVng8.o
Enter three numbers: 12
15
89
Largest number: 89

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Palindrome:

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main.cpp

```
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     int n, num, digit, rev = 0;
6     cout << "Enter a positive number: ";
7     cin >> num;
8     n = num;
9     do
10    {
11        digit = num % 10;
12        rev = (rev * 10) + digit;
13        num = num / 10;
14    } while (num != 0);
15    if (n == rev)
16        cout << " The number is a palindrome.";
17    else
18        cout << " The number is not a palindrome.";
19    return 0;
20 }
21
```

Run

Output

/tmp/Fjnt3LVng8.o
Enter a positive number: 12121
The number is a palindrome.

Clear

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Sum of Natural num:

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main.cpp

```
1 #include <iostream>
2 using namespace std;
3 int add(int n);
4 int main() {
5     int n;
6     cout << "Enter a positive integer: ";
7     cin >> n;
8     cout << "Sum = " << add(n);
9     return 0;
10 }
11 int add(int n) {
12     if(n != 0)
13         return n + add(n - 1);
14     return 0;
15 }
```

Run

Output

/tmp/Fjnt3LVng8.o
Enter a positive integer: 21
Sum = 231

Clear

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