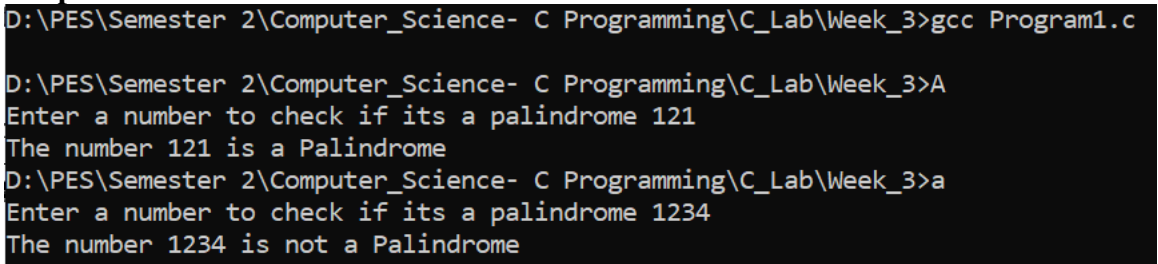


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	Date: 20/05/2021	Week Number: 3

1	<p>Write a function to reverse a given number and check whether a given number is palindrome or not.</p> <p>Input: Enter the number 121</p> <p>Output: The Number 121 is Palindrome</p> <p>Input: Enter the number 123</p> <p>Output: Number 123 is Not Palindrome</p>
	<p>Program: #include<stdio.h> #include<conio.h></p> <p>int reverse(int num); int isPalindrome(int num1, int num2);</p> <p>int main() { int num,temp,num1,rev=0; printf("Enter a number to check if its a palindrome "); scanf("%d",&num);</p> <p> num1 = num; rev = reverse(num);</p> <p> if(isPalindrome(num1, rev)) printf("The number %d is a Palindrome ",num1); else printf("The number %d is not a Palindrome ",num1); return 0;</p>

	<pre> } int reverse(int num) { int rev = 0; int temp; while(num) { temp = num%10; num = num/10; rev = rev*10 + temp; } return rev; } int isPalindrome(int num1, int num2) { if(num1==num2) return 1; else return 0; } </pre>
	<p>Output Screenshot:</p> 
2	<p>Write a C program to compute GCD of three numbers using functions.</p> <p>Input:</p> <p>Enter the values of a,b and c</p> <p>10 4 16</p> <p>Output:</p> <p>GCD(10,4,16)=2</p>
	<p>Program:</p>

Week 3: Programs on User Defined Functions

	<pre>#include<stdio.h> #include<conio.h> int gcd(int num1,int num2); int main() { int num1,num2,num3,result; printf("Enter three numbers to find GCD "); scanf("%d%d%d",&num1,&num2,&num3); result = gcd(num1,num2); result = gcd(num3,result); printf("The GCD of three numbers %d, %d and %d is %d",num1,num2,num3,result); return 0; } int gcd(int num1,int num2) { while(num1!=num2) { if(num1>num2) num1 = num1-num2; else num2 = num2-num1; } return num1; }</pre>
	<p>Output Screenshot:</p> 
3	<p>Write a program in C to check Armstrong and perfect numbers using functions.</p> <p>Input:</p> <p>Input any number: 153</p> <p>Output:</p>

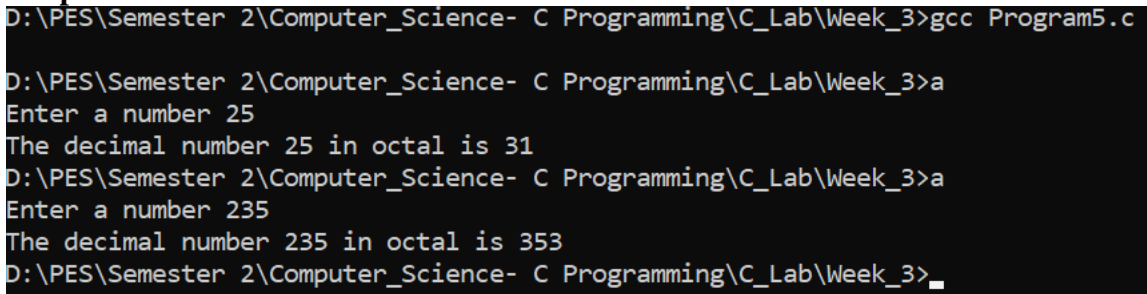
Week 3: Programs on User Defined Functions

	<p>The 153 is an Armstrong number.</p> <p>The 153 is not a Perfect number.</p> <p>Input:</p> <p>Input any number: 28</p> <p>Output:</p> <p>The 28 is not an Armstrong number.</p> <p>The 28 is a Perfect number.</p>
	<p>Program:</p> <pre>#include<stdio.h> #include<conio.h> void armstrong(int num); void perfectNumber(int num); int main() { int num; printf("Enter a number "); scanf("%d",&num); armstrong(num); perfectNumber(num); return 0; } void armstrong(int num) { int r,temp,sum=0; temp = num; while(num>=1) { r = num%10; sum = sum + (r*r*r); num = num/10; } if(temp==sum) printf("The number %d is an Armstrong number \n",temp); else printf("The number %d is not an Armstrong number \n",temp); } void perfectNumber(int num) { </pre>

Week 3: Programs on User Defined Functions

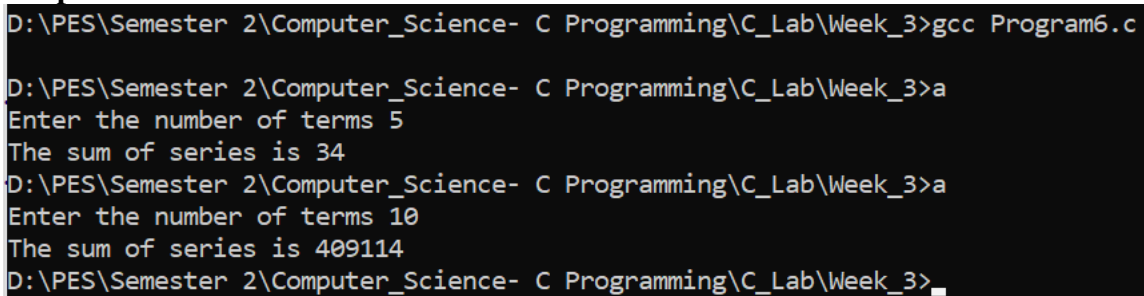
	<pre> int sum=0,i,temp; temp = num; for(i=1;i<num;i++) { if(num%i==0) sum = sum +i; } if(temp == sum) printf("The number %d is a perfect number ",temp); else printf("The number %d is not a perfect number ",temp); } </pre>
	<p>Output Screenshot:</p> 
4	<p>Write a program in C to check whether a number is a prime number or not using function</p> <p>Input: Input a positive number : 12</p> <p>Output: The number 12 is not a prime number</p> <p>Input: Input a positive number : 13</p> <p>Output: The number 13 is a prime number</p>
	<p>Program: #include<stdio.h> #include<conio.h></p>

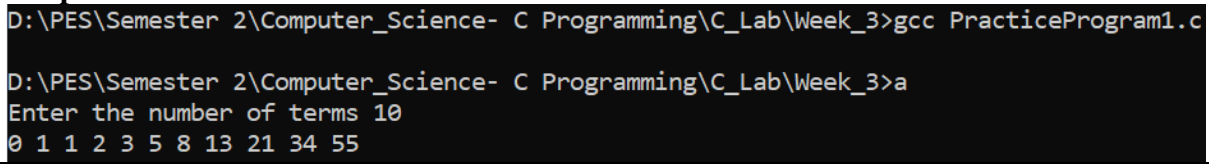
	<pre> int isPrime(int num); int main() { int num; printf("Enter a number to check prime or not "); scanf("%d",&num); if(isPrime(num)) printf("The number %d is a prime ",num); else printf("The number %d is not a prime ",num); } int isPrime(int num) { int i; for(i=2;i<num;i++) { if(num%i==0) return 0; } return 1; } </pre>
	<p>Output Screenshot:</p> 
5	<p>Write a program in C to convert decimal number to octal number using function</p> <p>Input:</p> <p>Input any decimal number : 25</p> <p>Output:</p> <p>Equivalent Octal Number: 31</p> <p>Input:</p> <p>Input any decimal number : 15</p>

	<p>Output:</p> <p>Equivalent Octal Number: 17</p>
	<p>Program:</p> <pre>#include<stdio.h> #include<conio.h> int decToOct(int num); int main() { int num,octal; printf("Enter a number "); scanf("%d",&num); octal = decToOct(num); printf("The decimal number %d in octal is %d",num,octal); return 0; } int decToOct(int dec) { int rem,oct,k; k = 1; oct = 0; while(dec!=0) { rem = dec%8; oct = rem*k + oct; k = k*10; dec = dec/8; } return oct; }</pre>
	<p>Output Screenshot:</p> 

Week 3: Programs on User Defined Functions

6	<p>Write a program in C to find the sum of the series $1!/1+2!/2+3!/3+4!/4+5!/5$ using function.</p> <p>Output:</p> <p>The sum of the series is : 34</p>
	<p>Program:</p> <pre>#include<stdio.h> #include<conio.h> int series(int n); int fact(int n); int main() { int n,s; printf("Enter the number of terms "); scanf("%d",&n); s = series(n); printf("The sum of series is %d",s); return 0; } int series(int n) { int i,sum=0; for(i=1;i<=n;i++) { sum = sum + (fact(i))/i; } return sum; } int fact(int n) { int i,factorial=1; for(i=n;i>0;i--) { factorial = factorial*i; } return factorial; }</pre>

	<p>Output Screenshot:</p>  <pre> D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>gcc Program6.c D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>a Enter the number of terms 5 The sum of series is 34 D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>a Enter the number of terms 10 The sum of series is 409114 D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>_ </pre>
1	<p>Practice Programs</p> <p>Write a program to display Fibonacci series in C within a range using a function</p> <p>Input:</p> <p>Enter range: 5</p> <p>Output:</p> <p>The fibonacci series is:</p> <pre>0 1 1 2 3 5</pre>
	<p>Program:</p> <pre> #include<stdio.h> #include<conio.h> void fibonacci(int n); int main() { int n; printf("Enter the number of terms "); scanf("%d",&n); fibonacci(n); return 0; } void fibonacci(int n) </pre>

	<pre> { int i,fib1,fib2,fib; fib1 = 0; fib2 = 1; printf("%d %d ",fib1,fib2); for(i=2;i<=n;i++) { fib = fib1 + fib2; printf("%d ",fib); fib1 = fib2; fib2 = fib; } } </pre>
	<p>Output Screenshot:</p> 
2	<p>Write a program to check triangle validity when angles are given using functions.</p> <p>Input:</p> <p>Enter three angles of triangle:</p> <p>30</p> <p>40</p> <p>60</p> <p>Output:</p> <p>Triangle is not valid</p> <p>Input:</p> <p>Enter three angles of triangle:</p> <p>30</p> <p>60</p> <p>90</p>

	<p>Output:</p> <p>Triangle is valid</p>
	<p>Program:</p> <pre>#include<stdio.h> #include<conio.h> void triangle(int a,int b,int c); int main() { int a,b,c; printf("Enter the three angles of the triangle "); scanf("%d%d%d",&a,&b,&c); triangle(a,b,c); return 0; } void triangle(int a,int b,int c) { if(a>0 && a<179 && b>0 && b<179 && c>0 && c<179) { if(a+b+c==180) printf("The triangle is valid"); else printf("The triangle is invalid"); } else printf("Input angle/angles are invalid"); }</pre>
	<p>Output Screenshot:</p>

Week 3: Programs on User Defined Functions

```
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>gcc PracticeProgram2.c
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>a
Enter the three angles of the triangle 30 60 90
The triangle is valid
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>a
Enter the three angles of the triangle 30 40 70
The triangle is invalid
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>a
Enter the three angles of the triangle 20 190 1
Input angle/angles are invalid
D:\PES\Semester 2\Computer_Science- C Programming\C_Lab\Week_3>
```