Lab - III

Srn: PES2UG24CS311

Name: Neeraj R Rugi

1:

#include<stdio.h>

int main(){

printf("Enter a number: \n");

int num;

scanf("%d", &num);

int sum = 0, temp = num, x;

int digit = 0;

while(temp){

digit++;

temp /=10;

}

temp = num;

while(num){

x = num % 10;

sum += pow(x, digit);

num /= 10;

}

if(sum == temp)

printf("It is armstrong number\n");

else

printf("It is not an armstrong\n");

return 0;

}

2:

#include<stdio.h>

int main(){

printf("Enter a number: \n");

int num;

scanf("%d", &num);

int sum = 0, temp = num, x;

temp = num;

int digit =0;

for(int i = 1; i <= num; i++){

temp = i;

while(temp){

digit++;

temp /=10;

}

digit--;

temp = i;

//printf("digit: %d\n", digit);

//printf("temp: %d i: %d\n", temp, i);

while(temp){

sum += (temp % 10) \* pow(10, digit);

//printf("sum: %d\n", sum);

temp /= 10;

digit--;

}

if(sum == i)

printf("%d is palindrome\n", i);

digit = 0;

sum = 0;

}

return 0;

}

3:

#include<stdio.h>

int main(){

printf("Enter a number: \n");

int num1, num2,n;

scanf("%d", &n);

int is\_prime\_1 = 1;

int is\_prime\_2 = 1;

int is\_prime\_3 = 1;

int num3;

for(int j = 2; j <= n; j++)

{

num1 = j;

for(int l = 2; l<=n; l++)

{

num2 = l;

is\_prime\_1 = 1;

is\_prime\_2 = 1;

is\_prime\_3 = 1;

//printf("for (%d, %d):\n", num1, num2);

for(int i = 2; i < (num1); i++){

if (num1 % i == 0){

is\_prime\_1 = 0;

//printf("%d is not prime\n", num1);

}

}

for(int i = 2; i < (num2); i++){

if (num2 % i == 0){

is\_prime\_2 = 0;

//printf("%d is not prime\n", num1);

}

}

if (is\_prime\_1 == 1 && is\_prime\_2 == 1){

printf("The numbers (%d, %d) are both prime and:\n", num1, num2);

num3 = num2 - num1;

if(num3<0)

num3 = -1 \* num3;

for(int i = 2; i < (num3); i++){

if (num3 % i == 0)

is\_prime\_3 = 0;

}

if(num3 == 1 || num3 == 0)

is\_prime\_3 = 0;

if (is\_prime\_3 == 1){

printf("They are super primes\n");

}

else

printf("They are Not super Primes\n");

printf("\n\n");

}

}

}

return 0;

}

4:

#include<stdio.h>

int main(){

printf("Enter 0 to stop the program: \n");

int num = 0;

int factor\_sum;

while(1){

scanf("%d", &num);

if(num == 0)

break;

factor\_sum = 0;

for(int i = 1; i <= (num/2); i++){

if (num % i == 0)

factor\_sum += i;

}

if(factor\_sum == num)

printf("%d is a perfect number\n", num);

else

printf("%d is not a perfect number\n", num);

}

return 0;

}