Assignment 3

Q2

//print table

#include<stdio.h>

void main(){

int num=2,a;

int i=0;

while(i<10){

a=++i;

printf("%d \* %d = %d \n",num,a,num\*a);

}

}

Q1

//print no from 1 to 10

#include<stdio.h>

void main(){

int i=1;

while(i<=10){

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

i++;

}

}

Q3

//sum of the number within given range

#include<stdio.h>

void main(){

int start=5,end=10;

int sum=0;

int i=start;

while(i<=end){

sum=sum+i;

i++;

}

printf("sum from %d to %d is %d",start,end,sum);

}

Q4

//prime number

#include<stdio.h>

void main(){

int num=10;

int i=2;

while(i<num){

if(num%i!=0){

i++;

}

else{

break;

}

}

if(i==num){

printf("Number is prime");

}

else{

printf("number is not prime");

}

}

Q5

//armstrong by count of digits//4 digit 1634 3digit 153

#include<stdio.h>

#include<math.h>

void main(){

int num,rem;

printf("Enter the num:");

scanf("%d",&num);

int num\_O=num;

int num\_2=num;

int sum\_P=0;

int count=0;

while(num>0){

num=num/10;

count++;

}

while(num\_2>0){

rem=num\_2%10;

num\_2=num\_2/10;//dec

//pow(base,power)

//power=pow(rem,count);

//by using loop // to calculate the power as per count

int power=1;

int cnt=count;

while(cnt!=0){

power=power\*rem;

cnt--;

}

sum\_P=sum\_P+power;

}

if(num\_O==sum\_P)

{

printf("%d is armstrong number",num\_O);

}

else{

printf("%d is not an armstrong number",num\_O);

}

}

Q6

//perfect number

#include<stdio.h>

void main(){

int num=6,sum\_F=0;

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

if(num%i==0){

sum\_F=sum\_F+i;//adding factors here

}

}

// check it is perfect number or not

if(num==sum\_F){

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

}

else{

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

}

}

Q7

//factorial number

#include<stdio.h>

void main(){

int num=5,fact=1;

int i=num;

while(i>0){

fact=fact\*i;

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

i--;

}

printf("\n factorial of %d is %d",num,fact);

}

Q8

//strong number

#include<stdio.h>

//declaration

int strong();

void main(){

int res=strong();//call

if(res){

printf("It is strong number");

}

else{

printf("It is not strong number");

}

}

int strong(){

int num=145;

int num\_O=num,rem,sum\_fact=0;

while(num>0){

rem=num%10;

num=num/10;//inc /dec

//for factorial

int fact=1;//for each iteration it must be 1 initialy

while(rem>0){

fact=fact\*rem;

rem--;

}

sum\_fact=sum\_fact+fact;

}

//check the sum of fact of each digit

if(num\_O==sum\_fact){

return 1;

}

else{

return 0;

}

printf("after returns");

}

Q9

//palindrom num -->num==reverse of that num

#include<stdio.h>

void main(){

int num=121;

int num\_O=num,rev=0;

// seperate the digits

int rem=0;

while(num>0){

rem=num%10;

num=num/10;

rev=rev\*10+rem;

}

if(rev==num\_O){

printf("The number is palindrom %d",num\_O);

}

else{

printf("The number is not palindrom %d ",num\_O);

}

}

Q10

//sum of first and last digit of the number

#include<stdio.h>

void main(){

int num=143;

int O\_num=num;

int last\_digit,first\_digit,rem,sum=0;

last\_digit=num%10;

printf("\nlast %d",last\_digit);

while(num>0){

rem=num%10;

num=num/10;

}

first\_digit=rem;

printf("\nfirst %d",first\_digit);

sum=first\_digit+last\_digit;

printf("\nThe sum of last and first digit of the num %d is %d",O\_num,sum);

}

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