//Swapping of two numbers

open System

let swap=

printfn "Enter a number 1"

let mutable a =int(Console.ReadLine())

printfn "Enter number 2"

let mutable b =int(Console.ReadLine())

let temp=a

a<=b

b<-temp

printfn"After swapping a:%d b%d" a b

swap

Console.Read()

\*maximum of three numbers\*

open System

printf "Enter number 1"

let a=int(Console.ReadLine())

printf"Enter Number 2"

let b=int(Console.ReadLine())

printf"Enter number 3"

let c=int(Console.ReadLine())

if a>>b && a>>c them

printfn"%d is max" a

elif b>c then

printfn"%d is max" b

else

printfn"%d is max" c

Console.Read()

//Factorial

open System

printfn"Enter a number"

let n = int(Console.ReadLine())

let mutable f=1

for i=1 to n do

f<-f\*1

printfn"Enter a factorial of number is: %d"f

Console.Read()

//perfect number

open System

let perfect()

printf"Enter a number"

let mutable num=int(Console.ReadLine())

let mutable sum=0

for i=1 to n-1 do

if num%i=0 then

sum=sum+i

if sum=num then

printfn "%d is perfect number"num

perfect()

Console.Read()

//sum of digit

open System

let sum()=

printfn"Enter the number"

let mutable n= int(Console.ReadLine())

let mutable sum=0

let mutable dig=0

while(n>0)do

dig<-n%10

sum<-sum+dig

n<-n/10

printfn"Number of digit is %d"sum

sum()

Console.ReadLine()

//prime number

open System

let prime()=

let mutable flag=false

let mutable i=1

while(i<100)do

flag<-false

for j=2 to i/2 do

if i%j=0 then

flag <-true

if flag=false then

printfn "%d"i

i<-i+1

prime()

Console.ReadLine()

//palindrome

open System

printfn"Enter a number"

let mutable n = int(Console.ReadLine())

let mutable reverse=0

let no =n

while n<>0 do

reverse <- reverse\*10

reverse <- Reverse +n%10

n<-n/10

if no = reverse then

printfn"%d is palindrome"no

else

printfn"%d is not a palindrome"no

Console.Read()

//fibonacci

open System

printfn"Enter a number"

let n = int(Console.ReadLine())

printfn "Fibonacci Series of %d numbers:"n

let mutable n1=0

let mutable n2=1

let mytable temp=0

printfn "%d"n1

printfn"%d"n2

for i=1 to n do

printfn"%d"(n1+n2)

temp<-n2

n2<-n1+n2

n1<-temp

Console.Read()

//print the pattern

1

3 5

7 9 11

open system

printfn"Enter a Number"

let n=int(Console.ReadLine())

printfn "Pattern %d lines:"n

let mutable k=1

for i=1 to n do

for j=1 to i do

printfn "%d"k

k<-k+2

printfn""

Console.Read()

//Factorial using Recursion

open system

printfn"Enter a Number"

let n=int(Console.ReadLine())

let rec recFact no:int=

if n=0 ||n=1 then

1

else

no\*recfact(no-1)

let fact = recFact n

printfn"Factorial of %d is %d" n fact

Console.ReadLine()

//sum of digits using recursion

open system

printfn"Enter a Number"

let n=int(Console.ReadLine())

let mutable sum=0

let mutable n=0

let sumOfDigits(no:int):int

num<-no

while(num<>0)do

sum<- sum+num%10

num<- num/10

sum

let ans= sumOfDigits n

printfn "Sum of %d is %d"n ans

Console.ReadLine()

//calculate sum of array elements

open System

(\*let array1 = [|for i in 1..10->1|]

let getArraySum arr :int 32=

let mutable sum =0

printfn"Array of Elements are as follows:"

for i in 0..array1.Length-1 do

printfn"%i "array1.[i]

sum<-sum+array1.[i]

sum

let ans=getArraySum array1

printfn"\nSum is %i" ans\*)

//find max elements from array

open System

(\*let array1 = [|for i in 1..10->1|]

let getArraySum arr :int 32=

let mutable sum =0

printfn"Array of Elements are as follows:"

for i in 0..array1.Length-1 do

printfn"%i "array1.[i]

sum<-sum+array1.[i]

sum

let ans=getArraySum array1

printfn"\nSum is %i" ans\*)

//print reverse elements of array

open System

(\*let array1 = [|for i in 1..10->1|]

let getArraySum arr :int 32=

let mutable sum =0

printfn"Array of Elements are as follows:"

for i in 0..array1.Length-1 do

printfn"%i "array1.[i]

sum<-sum+array1.[i]

sum

let ans=getArraySum array1

printfn"\nSum is %i" ans\*)