program basics;

!just does simple arithmetic

begin

writeln(2+3+4);

writeln(5%2);

writeln(2\*3 + 4\*5);

writeln(9+2\*7-3);

end.

-------------------------------------------------------------------------------------------------------

program basics1;

! tests variables and arithmetic

var a,b,c, d,e:integer;

begin

a:= 5;

b:= 6;

c:= 7;

d:=8;

e:= 9;

writeln(a+b+c);

writeln(d%a);

writeln(a\*b + c\*d);

writeln(e+2\*c-3);

end.

-------------------------------------------------------------------------------------------------------

program swap;

var a,b, temp: integer;

begin

write('Enter a: ');

read(a);

write('Enter b: ');

read(b);

temp := a;

a:= b;

b:= temp;

write('a is now '); writeln(a);

write('b is now '); writeln(b);

end.

-------------------------------------------------------------------------------------------------------

program add; ! adds n numbers

var n, sum :integer;

begin

sum := 0;

writeln('Enter numbers End with 999’);

read(n);

while n <> 999 do

begin

sum := sum + n;

write('n: ');

read(n);

end;

write ('The sum is '); write(sum);

end.

-------------------------------------------------------------------------------------------------------

program quessNumber; ! loops and if-else

var a,b,num, correct, guess, count: integer;

begin

write('Enter two four digit numbers ');

read(a,b);

num := (a\*b/73)%100+1;

writeln ('OK I am thinking of a number between 1 and 100');

correct := 0;

count := 0;

while (correct <> 1) do

begin

count := count + 1;

write('Guess: ');

read(guess);

if (guess > num) then

writeln('Too high')

else if (guess < num) then

writeln('Too low')

else

begin

writeln('You got it ');

correct := 1;

end;

end;

write('Number of guesses: '); writeln(count);

end.

-------------------------------------------------------------------------------------------------------

program nothing;

var x, y :integer;

procedure W(x,y:integer);

var a,b,c: integer;

begin

if (x = 1) then

c := x + y

else

begin

a := 5;

b := 6;

c := a\*b+x\*y;

end;

write(c);

end;

begin

write('Enter two integers ');

read(x); read (y);

call W(x,y);

end.

-------------------------------------------------------------------------------------------------------

program ConvertToDecimal;

var num:integer;

procedure binaryToDecimal( num : integer);

var decimal, power, temp, digit: integer;

begin

decimal:= 0;

power:= 1;

temp := num;

while (temp > 0) do

begin

digit := temp % 10;

temp := temp / 10;

decimal := decimal + digit\*power;

power := power \* 2;

end;

write('Decimal is '); write(lndecimal);

end;

begin

write('Enter a binary number ');

read(num);

call binaryToDecimal(num);

end.

-------------------------------------------------------------------------------------------------------

program swap1; ! swaps using a procedure

var a,b: integer;

procedure swap(a,b:integer);

var temp:integer;

begin

temp := a;

a:= b;

b:= temp;

write('a is now '); writeln(a);

write('b is now '); writeln(b);

end;

begin

write('Enter a: ');

read(a);

write('Enter b: ');

read(b);

call swap(a,b);

end.

-------------------------------------------------------------------------------------------------------

program fibN; ! calculates the nth Fibonacci number

var n:integer;

procedure fibonaccii(n: integer);

var fib,previous, i, temp : integer;

begin

fib := 1;

previous := 1;

i := 2;

while i < n do

begin

temp := fib;

fib := fib + previous;

previous := temp;

i := i + 1;

end;

write(' Fibonacci('); write(n); write(') is ');

writeln (fib);

end;

begin

write('Enter n: ');

read(n);

call fibonaccii( n);

end.

-------------------------------------------------------------------------------------------------------

program vertical; ! writes an integer vertically (recursive)

var n: integer;

procedure writeVertical(n:integer);

begin

if n < 10 then

begin

writeln (n);

end

else

begin

call writeVertical(n/10);

writeln(n%10);

end;

end;

begin

write('Enter a positive integer ');

read (n);

call writeVertical(n);

end.

-------------------------------------------------------------------------------------------------------

program Binary; ! Recursive , give binary value of decimal

var x: integer;

procedure convert( x: integer);

var a: integer;

begin

if x <> 0 then

begin

a := x%2;

x := x/2;

call convert(x);

write(a);

end;

end;

begin

write('Enter a decimal number ');

read(x);

call convert(x);

end.

-------------------------------------------------------------------------------------------------------

program Hanoi;

var n, start, goal, extra:integer;

procedure move( n, start, goal, extra : integer);

var w:integer;

begin

if n >0 then

begin

call move(n-1, start, extra, goal);

write(start); write( ' --> ' ); write(goal); writeln(' ');

call move(n-1, extra, goal, start);

end;

end;

begin

write('Enter number of disks' );

read (n);

write('Enter start' );

read(start) ;

write('Enter goal' );

read(goal);

write('Enter the extra' );

read(extra);

call move(n, start, goal, extra);

end.