Jatin Csc/21/11

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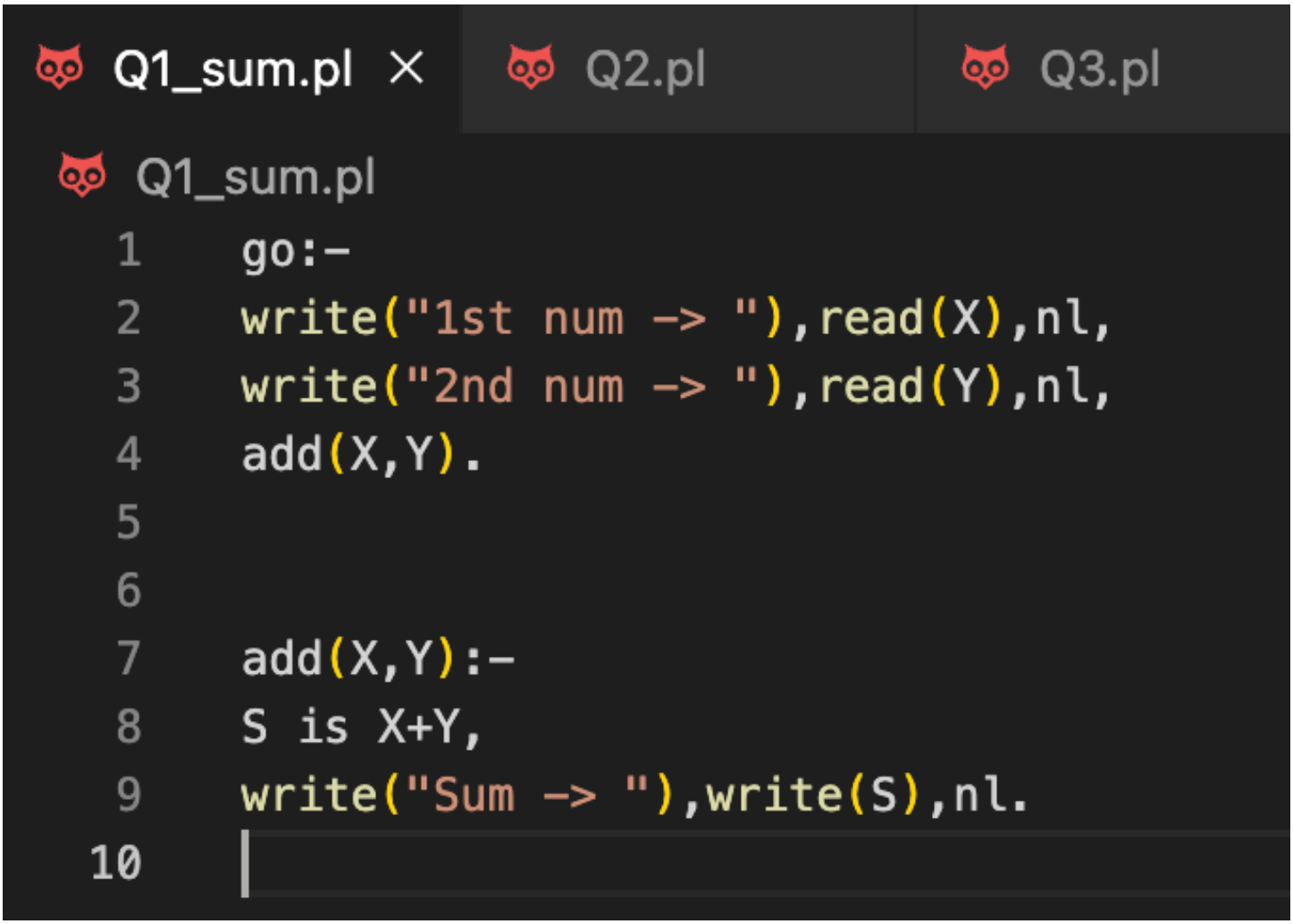
Topic:
First 5 Practicles

SUBMITTED TO:
MRS NEHA NATH

Q1

Sum of two number chosen by the user.

Code :-



Output :-

```
?- go.
1st num -> 4352432
|: .

2nd num -> |: 53253252352.

Sum -> 53257604784
true.

?-
```

Q2

Find the maximum of two user input number.

Code :-

Q1_sum.pl | Q2.pl | Q3.pl | Q4.pl | Q5.pl

Q2.pl

```
1   go:-
2   write("enter 1st num -> "),read(X),nl,
3   write("enter 2st num -> "),read(Y),nl,
4   max(X,Y).
5
6   max(X,Y):-
7   X>=Y -> R is X,write(R),write('  '),write("is greater than "),write(Y);
8   R is Y,write(R),write(' '),write("is greater than "),write(X).
```

Output :-

```
?- consult("Q2").
true.

?- go.
enter 1st num -> -56
|: .

enter 2st num -> |: 45.

45 is greater than -56
true.

?-
```

Q3

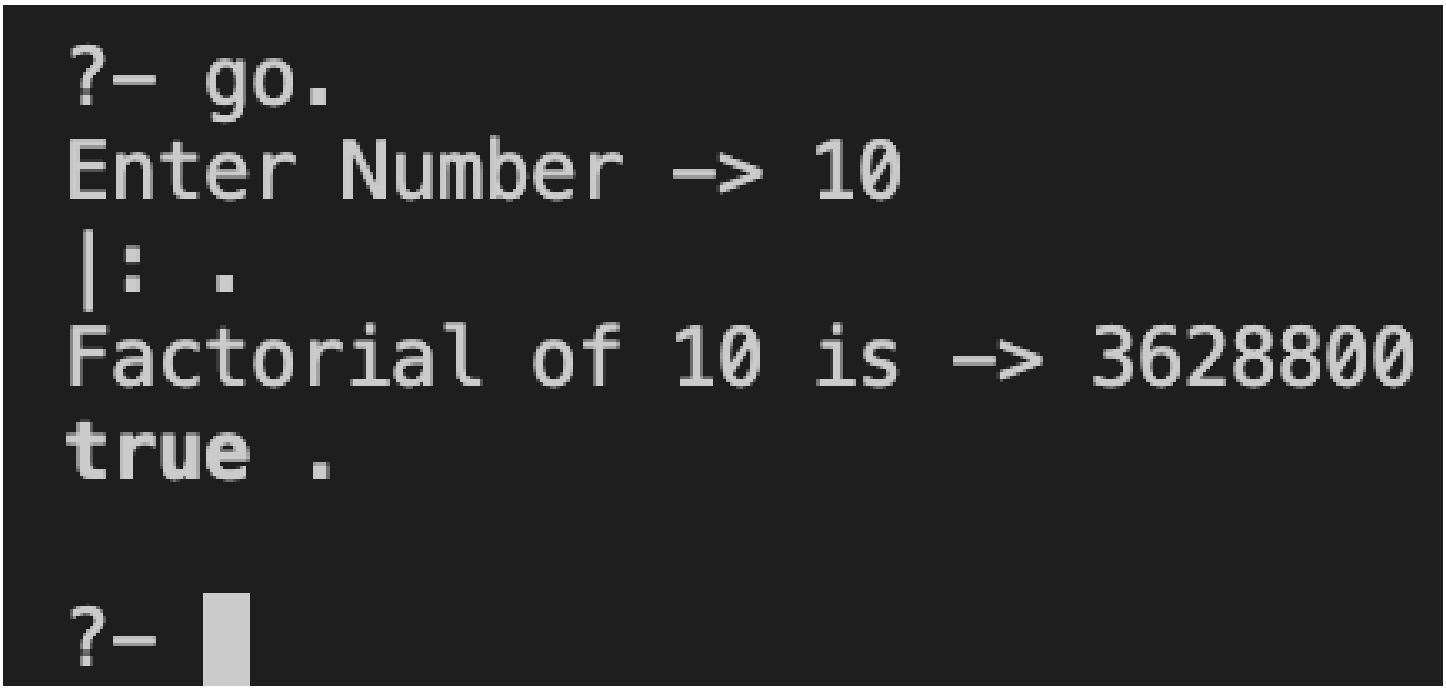
Factorial of Nth Number.

Code :-

Q3.pl

```
1   # factorial
2   go:-
3   write("Enter Number -> "),read(N),write("Factorial of "),
4   write(N),write(" is -> "),factorial(N,ANS),write(ANS).
5
6   factorial(0,1).
7   factorial(N,ANS):-
8   M is N-1,
9   factorial(M,K),
10  ANS is N*K.
```

Output -



Q4

Write a program in PROLOG to implement generate_fib(N,T) where T represents the Nth term of the fibonacci series.

Code :-

Q4.pl

```
1   # 4. Write a program in PROLOG to implement generat
2
3   generate_fib(0,1).
4   generate_fib(1,1).
5   generate_fib(N,T):-
6   N1 is N-1,
7   generate_fib(N1,T1),
8   N2 is N-2,
9   generate_fib(N2,T2),
10  T is T1+T2.
11
12
13  go:-
14  write("Enter nth number -> "),read(X),nl,write(X),
15  write("th Fibonaci number is -> "),
16  generate_fib(X,ANS),write(ANS).
```

Output -

```
?- consult("Q4").
true.

?- go.
Enter nth number -> 10.

10th Fibonaci number is -> 89
true .

?- go.
Enter nth number -> 5.

5th Fibonaci number is -> 8
true .

?-
```

Q5

GCD of two user input numbers.

Code :-

Q5.pl

```
1
2    gcd(X,0,X).
3    gcd(X,Y,Z):-
4     R is mod(X,Y),
5     gcd(Y,R,Z).
6
7    go:-
8    write("Enter 1st number -> "),read(X),nl,
9    write("Enter 2nd number -> "),read(Y),nl,
10   write("GCD of "),write(X),write(" and ")
11   ,write(Y),write(" is "),
12   gcd(X,Y,ANS),write(ANS).
```

Output -

```
?- go.
Enter 1st number -> 136.

Enter 2nd number -> |: 8.

GCD of 136 and 8 is 8
true .

?- go.
Enter 1st number -> 50.

Enter 2nd number -> |: 45.

GCD of 50 and 45 is 5
true .

?-
```

THE END