

Logic Programming: Small exercises

Write PROLOG programs for the following problems:

Exercise

1. Define the Factorial (i.e. $\text{fact}(n) = 1 * 2 * 3 * \dots * (n-1) * n$)
2. The Fibonacci sequence $f(1), f(2), f(3), \dots$ is: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55..... As you see the definition is easy to grasp:
 $f(1) = f(2) = 1$
 $f(n) = f(n-2) + f(n-1)$, if $n \geq 3$

3. Write rules which finds a path in a graph

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arc(a,b).      arc(b,c).  
arc(a,c).      arc(a,d).  
arc(b,e).      arc(e,f).  
arc(b,f).      arc(f,g).
```

4. Compute the Maximum of two numbers X and Y.
5. Compute the absolute value of a number X.