@02721735   Prajjwal Dangal

https://github.com/prajjwaldangal/SOP-LogicalProgramming

16 ▮▮▮▯ ques2.pl   View

```
...   ...   @@ -1,9 +1,15 @@
1           -% [a, 100, b, [200, c, 100], c, 300, d]
2           -
3     1      sum-up-numbers-general([], 0).
4           -sum-up-numbers-general(L, N) :-  L = [A|B], \+number(A), sum-up-numbers-general(B, N).
5           -sum-up-numbers-general(L, N) :-  L = [A|B], number(A), sum-up-numbers-general(B, N1), N is A + N1.
6           -sum-up-numbers-general(L, N) :- L = [A|B], is_list(A),
      2    +sum-up-numbers-general(L, N) :-
      3    +                                          L = [A|B],
      4    +                                          \+number(A),
      5    +                                          sum-up-numbers-general(B, N).
      6    +sum-up-numbers-general(L, N) :-
      7    +                                          L = [A|B],
      8    +                                          number(A),
      9    +                                          sum-up-numbers-general(B, N1), N is A + N1.
      10   +sum-up-numbers-general(L, N) :-
      11   +                                          L = [A|B],
      12   +                                          is_list(A),
7     13                                             sum-up-numbers-general(A, N1),
8     14                                             sum-up-numbers-general(B, N2),
9     15                                             N is N1 + N2. ⏎
```

0 comments on commit `44cea2a`

9 ▮▮▮▮▯ ques2.pl   View

```
...   ...   @@ -1,12 +1,19 @@
1           -sum-up-numbers-general([], 0).
      1    +% case for empty list
      2    +sum-up-numbers-general([], 0).
      3    +
      4    +% case for when the atom is not a number
2     5      sum-up-numbers-general(L, N) :-
3     6                                             L = [A|B],
4     7                                             \+number(A),
5     8                                             sum-up-numbers-general(B, N).
      9    +
      10   +% case for when atom is a number
6     11     sum-up-numbers-general(L, N) :-
7     12                                             L = [A|B],
8     13                                             number(A),
9     14                                             sum-up-numbers-general(B, N1), N is A + N1.
      15   +
      16   +% case for when first element is list
10    17     sum-up-numbers-general(L, N) :-
11    18                                             L = [A|B],
12    19                                             is_list(A),
```

6 ▪▪▪▪▪ ques2.pl `View`

```
         @@ -0,0 +1,6 @@
      1  +% [a, 100, b, [200], c, 300, d]
      2  +
      3  +sum-up-numbers-general(L, N) :-  L = [A|B],
      4  +sum-up-numbers-general([], 0).
      5  +sum-up-numbers-general(L, N) :-
      6  +                                         d ⊘↵
```

11 ▪▪▪▪ new.pl `View`

```
         @@ -16,6 +16,15 @@
16   16  min(X,Y,X) :-  X < Y.
17   17  min(X,Y,Y) :-  Y < X.
18   18
     19  +find-min(L,M) :-
     20  +                    L = [A|B],
     21  +                    B = [C|D],
     22  +                    number(A),
     23  +                    find-min(B, )
     24  +
     25  +
19   26  min-above-min(L1, L2, N) :-
     27  +                               find-min(L2, M),
     28  +                               % take M
20   29                                  L2 = [A|B],
21        -                              number(A). ⊘↵
     30  +                               number(A)
```

```
         @@ -12,3 +12,10 @@
12   12  % L1 -> [100, 300, 200],    L2 -> [300, 100, 200, a]
13   13
14   14
     15  +min([],Y)  :-  Y.
     16  +min(X,Y,X) :-  X < Y.
     17  +min(X,Y,Y) :-  Y < X.
     18  +
     19  +min-above-min(L1, L2, N) :-
     20  +                            L2 = [A|B],
     21  +                            number(A). ⊘↵
```

```
         @@ -1,4 +1,3 @@
1        -% charlist(a,b,c,d,e,f).
2    1   sum-up-numbers-simple(L, N) :-
3    2                              L = [A|B],
4    3 +                            \+number(A),
```

```
         @@ -12,10 +11,4 @@
12   11
13   12  % L1 -> [100, 300, 200],    L2 -> [300, 100, 200, a]
14   13
15        -min([],Y)  :-  Y.
16        -min(X,Y,X) :-  X < Y.
17        -min(X,Y,Y) :-  Y < X.
18   14
19        -min-above-min(L1, L2, N) :-
20        -                          L2 = [A|B],
21        -                          number(A).
```

```
@@ -3,10 +3,19 @@
3    3                                      L = [A|B],
4    4                                      \+number(A),
5    5                                      sum-up-numbers-simple(B, N).
6         -
7         -
8    6    sum-up-numbers-simple([], 0).
9    7    sum-up-numbers-simple(L, N)  :-
10   8                                     L = [A|B],
11   9                                     number(A),
12   10                                    sum-up-numbers-simple(B, N1), N is A + N1.
     11  +
     12  +
     13  +% L1 -> [100, 300, 200],     L2 -> [300, 100, 200, a]
     14  +
     15  +min([],Y)  :-  Y.
     16  +min(X,Y,X) :-  X < Y.
     17  +min(X,Y,Y) :-  Y < X.
     18  +
     19  +min-above-min(L1, L2, N) :-
     20  +                               L2 = [A|B],
     21  +                               number(A).
```

```
21   21                                     sum-up-numbers-general(B, N2),
22        -                                 N is N1 + N2. ⊘↵
     22  +                                 N is N1 + N2.
     23  +
     24  +?- sum-up-numbers-general( [ [ [ 200, 100], [100] ], a, b, 100], 500).
     25  +true .
     26  +
     27  +?- sum-up-numbers-general( [], 0).
     28  +true .
     29  +
     30  +?- sum-up-numbers-general( [100], 100).
     31  +true .
     32  +
     33  +?- sum-up-numbers-general( [100, 200], 300).
     34  +true .
     35  +
     36  +?- sum-up-numbers-general( [a], 0).
     37  +true .
     38  +
     39  +?- sum-up-numbers-general( [a, 100, b, 200, c, 300, d], 600).
     40  +true .
     41  +
     42  +?- sum-up-numbers-general( [[]], 0).
     43  +true .
     44  +
     45  +?- sum-up-numbers-general( [[100]], 100).
     46  +true .
     47  +
     48  +?- sum-up-numbers-general( [100, [200]], 300).
     49  +true .
     50  +
     51  +?- sum-up-numbers-general( [a, 100, b, [200], c, 300, d], 600).
     52  +true .
     53  +
     54  +?- sum-up-numbers-general( [a, 100, [ [ b, [ [200], c ] ], 300, d]], 600).
     55  +true .
```

```prolog
-find-min(L,M) :-
-                    L = [A|B],
-                    B = [C|D],
-                    number(A),
-                    find-min(B, )
+min(X,Y,Y) :-  Y < X.


 min-above-min(L1, L2, N) :-
                           find-min(L2, M),
                           % take M
                           L2 = [A|B],
-                          number(A)
+                          number(A),
+                          find-min(L1, M2),
+                          min(M, M2, M),
+                          N is M2.
+
+min-above-min(L1, L2, N) :-
+                          find-min(L2, M),
+                          % take M
+                          L2 = [A|B],
+                          number(A),
+                          find-min(L1, M2),
+                          min(M, M2, M2),
+                          % you may need to make a delete function
+                          min-above-min
+
+
+common-unique-elements-helper
+
+common-unique-elements(L1,L2,N)  :-
```

```prolog


-common-unique-elements-helper
+isEqual (X, Y, Z)  :-
+
+common-unique-elements-helper (L, ele, List) :-
+                                                   L = [A|B],
+

 common-unique-elements(L1,L2,N)  :-
```

```
40   40    jj(X, Y)  :-  X = Y.
41   41
42        -% [a, b, c] , a
     42   +% [2,e,3,d,4,c,5,b,6,a,7]   ,  d
     43   +
     44   +common-unique-elements-helper (L, ele, )
     45   +
     46   +common-unique-elements-helper (L, ele, List) :-
     47   +                                                      L = [A|B],
     48   +                                                      jj(A, ele),
     49   +                                                      List = [ele | L].
     50   +
43   51    common-unique-elements-helper (L, ele, List) :-
44   52                                                        L = [A|B],
45        -                                                    jj (A, ele),
46        -                                                    common-unique-elements-helper(B,
47        -                                                    append()
     53   +                                                    /+ jj(A, ele),
     54   +                                                    common-unique-elements-helper(B,
     55   +
     56   +common-unique-elements(L1,L2,N)  :-
     57   +
     58   +
     59   +
     60   +
     61   +
     62   +
     63   +
     64   +
     65   +
48   66
49        -common-unique-elements(L1,L2,N)  :- N is 5.
```

8 ▪▪▪▪ ques2.pl   View

```
...  ...   @@ -1,6 +1,6 @@
1         -% [a, 100, b, [200], c, 300, d]
     1    +% [a, 100, b, [200, c, 100], c, 300, d]
2    2
3         -sum-up-numbers-general(L, N) :-  L = [A|B],
     3    +sum-up-numbers-general(L, N) :-  L = [A|B], \+number(A), sum-up-numbers-general(B, N).
     4    +sum-up-numbers-general(L, N) :-  L = [A|B], number(A), sum-up-numbers-general(B, N1), N is A + N1.
4    5     sum-up-numbers-general([], 0).
5         -sum-up-numbers-general(L, N) :-
6         -                                                  d ⊘↵
     6    +sum-up-numbers-general(L, N) :-  L = [A|B], is_List(A), sum-up-numbers-general(A, N1). ⊘↵
```

Commits on Feb 8, 2017

Ques3 : added
prajjwaldangal committed 11 seconds ago · `8208509` · `<>`

Ques4: complete
prajjwaldangal committed 3 minutes ago · `2b01acc` · `<>`

modified helper
prajjwaldangal committed 17 minutes ago · `73ccb5f` · `<>`

found way to append into list
prajjwaldangal committed 29 minutes ago · `6c5cb21` · `<>`

added to helper
prajjwaldangal committed 2 hours ago · `a6329af` · `<>`

ques4: few rules and predicates
prajjwaldangal committed 3 hours ago · `417fe88` · `<>`

ques3: got major portion done
prajjwaldangal committed 3 hours ago · `cfb2501` · `<>`

ques2: Testing against given test cases; don't copy paste this
prajjwaldangal committed 4 hours ago · `c8ce73c` · `<>`

Ques2: added comments
prajjwaldangal committed 4 hours ago · `3e2a8b2` · `<>`

ques2: cleanup and formatting
prajjwaldangal committed 4 hours ago · `44cea2a` · `<>`

Ques2: few more lines added
prajjwaldangal committed 5 hours ago · `6f8f98b` · `<>`

Ques2: some modifications
prajjwaldangal committed 11 hours ago · `d38975e` · `<>`

added separate file for ques2
prajjwaldangal committed 11 hours ago · `e177e65` · `<>`

added find-min predicate
prajjwaldangal committed 11 hours ago · `b2f30b1` · `<>`

Ques3: added rules - incomplete
prajjwaldangal committed 11 hours ago · `effe802` · `<>`

cleanup to start ques.3 anew
prajjwaldangal committed 11 hours ago · `3a93869` · `<>`

explored replacing negation number method by charlist -> ques.1
prajjwaldangal committed 11 hours ago · `12221f1` · `<>`

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15 ▮▮▮▮ **ques2.pl**   `View`

```
      @@ -1,3 +1,11 @@
   1  +% case for when first element is list
   2  +sum-up-numbers-general(L, N) :-
   3  +                                          L = [A|B],
   4  +                                          is_list(A),
   5  +                                          sum-up-numbers-general(A, N1),
   6  +                                          sum-up-numbers-general(B, N2),
   7  +                                          N is N1 + N2.
   8  +
1  9   % case for empty list
2  10    sum-up-numbers-general([], 0).
3  11
```

```
      @@ -13,10 +21,3 @@
13 21                                          number(A),
14 22                                          sum-up-numbers-general(B, N1), N is A + N1.
15 23
16    -% case for when first element is list
17    -sum-up-numbers-general(L, N) :-
18    -                                          L = [A|B],
19    -                                          is_list(A),
20    -                                          sum-up-numbers-general(A, N1),
21    -                                          sum-up-numbers-general(B, N2),
22    -                                          N is N1 + N2. ⊘↵
```

0 comments on commit 73ccb5f