

INST0072 ASSESSMENT 2 FEEDBACK SHEET / STUDENT NUMBER: 19075478

MARK OUT OF 25: 20

PERCENTAGE: 80%

PART A TEST QUERIES:

- ?- scrabble_score([s, c, r, a, b, b, l, e], Scrabble_score). WORKS FINE
- ?- scrabble_score([],Score). WORKS FINE
- ?- scrabble_score(X,Y). WORKS FINE
- ?- scrabble_score(X,10). WORKS FINE
- ?- ['shortWord'], findall(X, (shortWord(X), scrabble_score(X,10)), WordList), length(WordList, Words). WORKS FINE

PART B TEST QUERIES:

- ?- word_with_replacements([s, c, r, a, b, b, l, e], Word_with_replacements). WORKS BUT WITH MULTIPLE REPEATS
- ?- word_with_replacements(Word, [s, c, r, e, b, b, l, a]). WORKS BUT WITH MULTIPLE REPEATS
- ?- word_with_replacements([c, a, r, e], Word_with_replacements). WORKS BUT WITH MULTIPLE REPEATS
- ?- word_with_replacements(Word, [c, e, r, a]). WORKS BUT WITH MULTIPLE REPEATS
- ?- word_with_replacements([],X). WORKS FINE
- ?- word_with_replacements([p],X). WORKS FINE
- ?- word_with_replacements(W,R). GIVES ONLY 3 ANSWERS (REPEATED)

PROGRAM STYLE:

PART A IS VERY GOOD. PART B IS IN A GOOD DECLARATIVE STYLE, BUT THE ANSWER COULD BE SIMPLIFIED AND MADE MORE GENERAL BY USING NEGATION-AS-FAILURE.

PROGRAM LAYOUT:

GOOD, CLEAR LAYOUT ON THE WHOLE, BUT SPREAD LONG CLAUSES OUT OVER MORE THAN ONE LINE.

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1 /*19075478*/  
2 /*INST0072 LOGIC AND KNOWLEDGE REPRESENTATION*/  
3 /*DR ROB MILLER*/  
4 /*ASSESSMENT PART A*/  
5  
6 scrabble_points(a, 1).  
7 scrabble_points(b, 3).  
8 scrabble_points(c, 3).  
9 scrabble_points(d, 2).  
10 scrabble_points(e, 1).  
11 scrabble_points(f, 4).  
12 scrabble_points(g, 2).  
13 scrabble_points(h, 4).  
14 scrabble_points(i, 1).  
15 scrabble_points(j, 8).  
16 scrabble_points(k, 5).  
17 scrabble_points(l, 1).  
18 scrabble_points(m, 3).  
19 scrabble_points(n, 1).  
20 scrabble_points(o, 1).  
21 scrabble_points(p, 3).  
22 scrabble_points(q, 10).  
23 scrabble_points(r, 1).  
24 scrabble_points(s, 1).  
25 scrabble_points(t, 1).  
26 scrabble_points(u, 1).  
27 scrabble_points(v, 4).  
28 scrabble_points(w, 4).  
29 scrabble_points(x, 8).  
30 scrabble_points(y, 4).  
31 scrabble_points(z, 10).  
32  
33 scrabble_score([],0).  
34 scrabble_score([H|T], N) :- scrabble_score(T, N1),scrabble_points(H, P), N is N1 + P.
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BETTER TO SPREAD LONG CLAUSES OVER
MULTIPLE LINES.

GOOD

12
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12

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1 /*19075478*/  
2 /*INST0072 LOGIC AND KNOWLEDGE REPRESENTATION*/  
3 /*DR ROB MILLER*/  
4 /*ASSESSMENT PART B*/  
5  
6 word_with_replacements([], []).  
7  
8 word_with_replacements([a],[e]).  
9 word_with_replacements([e],[a]).  
10 word_with_replacements([X],[X]) :- X \= a, X \= e.  
11 word_with_replacements([H|T], [H1|T1]) :-  
12 word_with_replacements(T, T1),  
13 word_with_replacements([H], [H1]).
```

WORKS OK ON THE WHOLE,
BUT IT WOULD BE BETTER TO
HAVE SOME SIMPLE REPLACE
FACTS, AND USE NEGATION-AS-FAILURE
FOR THE CASE WHEN THERE IS NO
RELEVANT REPLACE FACT.
(SEE MY EXAMPLE ANSWER)

$$\frac{8}{13}$$