Task 10.1

Define a predicate bizarreTranslator/2 such that bizarreTranslator(L1, L2) takes an input list L1 and generates an output list L2. L1 contains letters a-z; L2 is L1 with all ‘a’, ‘e’, ‘i,’, ‘o’ and ‘u’ replaced by ‘1’, ‘2’, ‘3’, ‘4’ and ‘5’, respectively. For instance:
?- bizarreTranslator(['a', 'p', 'p', 'l', 'e'], X).

X = [1, p, p, l, 2] ;

false.

Task:10.2:

Let Board positions B be represented by a list of lists:
E.g., [[1,1],[2,3],[3,2]] denotes the board position where three queens are placed as follows:
Q - -
- - Q
- Q -

Write a predicate **straight(B)** that checks whether in board position B there are two queens in the same row (or column). Hint: use the member predicate.

Assignment Project Exam Help

Task 10.3

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Consider the following knowledge base:
sumsqrs([],0).

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sumsqrs([X|Xs],S) :-
    sumsqrs(Xs,Ss),
    S is X*X + Ss.

Call the knowledge base with a suitable query that explains what it computes.

Write second predicate computing the same with an accumulating argument.

Task 10. 4

Given the output
    Prolog and Java

Which of the following produces it and why?

    X=3,write('Prolog '),X==3,write('and '),1+2 is X,write('Java ').

    X is 3,write('Prolog '),X=3,write('and '),X==3,write('Java ').

    X==3,write('Prolog '),3 is X,write('and '),X=3,write('Java ').