문제해결기법(13967005)

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소프트웨어

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Q1. Draw a recursion diagram for puzzle() with n=5 (p.35)

puzzle(5)

puzzle(16)

puzzle(8)+16

puzzle(4)+8

puzzle(2)+4

puzzle(1)+2

return 1

return (1)+2

return ((1)+2)+4

return (((1)+2)+4)+8

return ((((1)+2)+4)+8)+16

return (((((1)+2)+4)+8)+16)

= 31

Q2. Draw a recursion diagram for bs() with the provided input in (p.36)

bs(list,0,5,5)

    bs(list,0,1,5)

        return 0

    return 0

= 0

Q3. State what the bs() program is designed to do (p.36)

Experiment_1

List = {5,10,15,25,45} ,key = 25

OUTPUT: 3

Experiment_2

List = {5,10,18,23,45} ,key = 25

OUTPUT: -1

Experiment_3

List = {5,9,18,23,45} ,key = 45

OUTPUT: 4

Experiment_4

List = {1,4,20,65,68} ,key = 1

OUTPUT: 0

Experiment_5

List = {5,25,125,625,3125} ,key = 25

OUTPUT: 1

State what the bs() program is designed to do

This program is designed to search the value in the array. The program returns the index of value in the array. If there is no value that program wants to find in the array, the program returns -1.