



Attempt the following problems:

1.
 - a. Design a general purpose matrix multiplication program which multiplies an $L \times M$ matrix by $M \times N$ matrix to produce an $L \times N$ resulting matrix.
 - b. Describe the binary search algorithm and write a VB.NET program to implement and test it. (15 mark)

2.
 - a. Write a VB.NET program to implement the two methods enqueue and dequeue then use it to perform radix sort on a given set of numbers.
 - b. Use while loop to reverse the elements of a queue. (15 mark)

3. Write a VB.NET program to implement the insert function of the binary tree. (15 mark)

4. Describe six common graph operations and write the two functions add vertex and add edge of the weighted graph. (15 mark)

5. Write the VB.NET codes using random file for the form load and the BOOKING button of the following form.

(15 mark)

P.T.O.

6. Write VB.NET-SQL codes for the following interface.

Form 1 Egyptian National Bank

Time: 12:53 Date: 13/06/2006

New Loan

Customer Id: 7 Customer Name: aa
 Loan Value: 80000 Loan Duration: 8
 Annual Rate: 0.3 Date: 31/05/2006
 Monthly Payment: 2206.12938196923

Date: 13/06/201 No. of Payments: 2 Monthly Payment: 2206.129381 Insert

Loan Flow

id1	customer	payment	loan_valu	m_interes	t_interest	repaymen	remainder	payment
2	7	1	80000	2000	2000	206.1293	79793.87	31/05/200
4	7	2	79793.87	1994.846	3994.846	211.2826	79582.58	31/05/200

Loan Repayment Pay Installment View Loans Add New Loan

(15 mark)

GOOD LUCK

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