

計算機概論 試題 (限用答案本作答)

1. 試說明下列縮寫名詞的意義，寫出全名並加以說明 (16%)
 (a) EC (b) ERP (c) KM (d) CRM (e) SCM
 (f) ES (g) DSS (h) EIS
2. 試說明下列4種郵件通訊協定的意義，寫出全名並加以說明 (8%)
 (a) SMTP (b) POP3 (c) IMAP (d) HTTP
3. 試說明下列縮寫名詞的意義，寫出全名並加以說明 (6%)
 (a) UML (b) N II (c) B2C
4. 試比較說明對稱式加密法與非對稱式加密法 (5%)
5. 請說明架設區域網路所需最基本的設備，並繪圖簡述之 (5%)
6. 請說明應用系統架構由早期集中式，演進成主從式架構 (5%)
 (Client/Server)，再演進成多層次架構(Multi-tier)之理由
7. 請繪簡圖並說明3種網路拓模(Toppolog)架構：星狀架構、環狀架構、及匯流排架構 (10%)
8. 請解釋下列物件導向程式設計名詞 (10%)
 (a)類別(class) (b)建構子(constructor) (c)多型(polymorphism)
 (d)繼承(inheritance) (e)封包(encapsulation)
9. (a)、(b)寫出程式執行的結果；(c)寫出 9*9 程式，結果如(c)所示 (15%)

```

(a)
Sub Tower(N, MoveFrom, MoveTo, Temp)
  If N = 1 Then
    Debug.Print "Move From "; MoveFrom; " To "; MoveTo
  Else
    Call Tower(N - 1, MoveFrom, Temp, MoveTo)
    Call Tower(1, MoveFrom, MoveTo, Temp)
    Call Tower(N - 1, Temp, MoveTo, MoveFrom)
  End If
End Sub
Sub Main()
  Call Tower(3, "A", "C", "B")
End Sub

(b) Sub Main()
  For i = 4 To 1 Step -1
    Print Spc(5 - i);
    For j = 1 To (2 * i - 1)
      Print "*";
    Next
    Print
  Next
  For i = 1 To 4
    Print Spc(5 - i);
    For j = 1 To (2 * i - 1)
      Print "*";
    Next
    Print
  Next
End Sub
  
```

(c)寫出 9*9 程式，結果如下圖

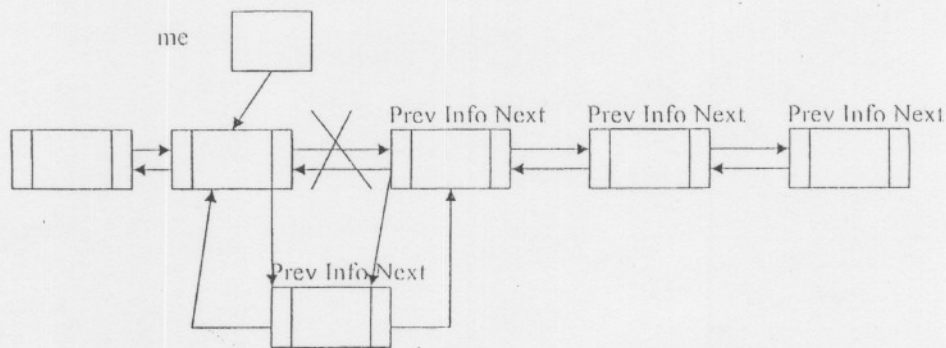
	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

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10. 設有雙鏈結串列(double linked list)，其資料結構如下：(20%)

```

Type Dblnodes
    Info      as string
    Prev     as integer
    Next     as integer
End type
Dim DbList(1 to 50) as Dblnodes
    
```



如圖所示，插入一節點於 me 所指節點後之 Visual Basic 程式如下：

```

Sub Insert_After(new_node as integer, me as integer)
    Dim Temp as integer
    Temp = DbList(me).Next
    DbList(new_node).Next=Temp
    DbList(new_node).Prev=me
    DbList(Temp).Prev=new_node
    DbList(me).next= new_node
End Sub
    
```

請完成插入一節點資料於 me 所指節點之前及刪去由 me 所指之節點的程式(Insert_Before 及 Delete 程式)

```

Sub Insert_Before(new_node as integer, me as integer)
    .....
End Sub

Sub Delete (me as integer)
    .....
End Sub
    
```

本試題係兩面印刷

試題完