淡江大學 106 學年度日間部轉學生招生考試試題

系別：資訊工程學系三年級　　科目：程式語言

考試日期：7 月 21 日(星期五) 第 2 節　　本試題共 6 大題， 2 頁

1. (8%) Yes or No
   (a) A Java program file (.java) should be compiled before execution?
   (b) C++ programming language is an objected-oriented programming language?
   (c) In C programming language, the notation "&" represents a pointer?
   (d) In C/C++ programming language, the size of "int" is 4 bytes?
2. (10%) The following code segment is used to judge if a student's score is pass or not. Please indicate the errors in the following code segment, and how to fix them.

```
#include <stdio.h>
#include <stdlib.h>
int main () {
    int score;
    printf("請輸入您的分數: ");
    scanf("%d", score);
    if (60<=score&&score<=100)
       printf("及格");
    else
       printf("不及格");
    return 0;
}
```

3. (10%) Write a pseudocode (using a "FOR" or "WHILE" loop) to print the following result.

```
  *
 ***
*****
 ***
  *
```

4. (10%) Please write down the output of the following JAVA program

```
import java.util.*;
public class Fibo {
    private List<Integer> fib = new ArrayList<>();
    {
        fib.add(0);
        fib.add(1);
    }
    Integer get(int n) {
        if(n >= fib.size()) for(int i = fib.size(); i <= n; i++)
{
            fib.add(fib.get(i - 1) + fib.get(i - 2));
        }
        return fib.get(n);
    }
    public static void main(String[] args) {
        Fibo fibo = new Fibo();
        for(int i = 0; i < 10; i++) {
            System.out.print(fibo.get(i) + " ");
        }
    }
}
```

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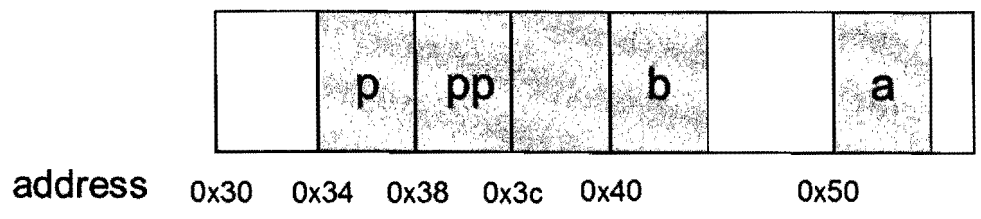
5. (30%) Write three C programs to print multiplication tables (99 乘法表), the programs should have the following features.
   (a) (5%) Use "two" for loops.
   (b) (10%) Use "only one" for loop.
   (c) (15%) Use "no loops".
6. (32%) Give the following code segment and physical memory location, please fill the following blanks.

```
int b = 100;

void changeP (int **pp)
{
    *pp = &b;
    **pp = 1000;
}

int main () {
    int a = 10;
    int *p;
    p = &a;

    printf(" *p=%d ", *p);

    changeP(&p);

    printf(" *p=%d ", *p);

    return 0;
}
```



(a) The result of the first printf
(b) The result of the second printf
(c) p= _____ (before calling changeP)
(d) p= _____ (after calling changeP)
(e) &p= _____
(f) &a=_____
(g) pp= _____
(h) *pp= _____ (before return 0)