計算機程式二 **111** 學年度第 **2** 學期小考 **3** 試題

系級：_____學號：_____ 姓名：_____

1. 下列程式輸出結果(The output for void f1()) :

(1) Line 1: __12__ (2) Line 2: _Tennis_ (3) Line 3: _Basketball_

```
enum Sport {Soccer=1, Basketball, Tennis, Baseball=10, Golf,
Running, Volleyball};
void f1(){
        enum Sport favSport, mySport;
        const char *pSportName[] = {"", "Soccer", "Basketball",
        "Tennis", "Baseball", "Golf", "Running", "Volleyball"};
        favSport = 3;
        if (favSport == Tennis) mySport = Basketball;
        else mySport = (enum Sport)(favSport - 1);
        printf("%d\n", Running);                    // (1)
        printf("%s\n", pSportName[favSport]);       // (2)
        printf("%s", pSportName[mySport]);          // (3)
}
```

2. (1) Line 1: ___static char___ (2) Line 2: _____p++_____

(3) Line 3: _____s1_____ (4) Line 4: _____NULL_____

請完成以下程式碼，使執行結果符合輸出。(Please complete the empty space to make the execution result match the output.)

The output of void f2(): 1A 2B 3C 4D 5E 6F

```
char *myStrtok(char *s1, char *s2){
  _______  *p;                    // (1)
  if (s1 == NULL) s1 = p ;
  else p = s1;
  if (*p == '\0') return NULL;
  while ((*p) != (*s2)){ p++;}
  *( ___ ) = '\0';                // (2)
  return ___;}                    // (3)
void f2(){
  char str[] = "1A,2B,3C,4D,5E,6F,";
  char *delim = ",";
  char *token;
  token = myStrtok(str, delim);
  while (token != NULL){
    printf("%s ", token);
    token = myStrtok(____, delim);}}    // (4)
```

3. 下列程式輸出結果(The output for void f3()) :

(1) Line 1: _____R_____ (2) Line 2: _____THE_____

(3) Line 3: _____I_____ (4) Line 4: _____ASIC_____

```
void f3(){
  char **p;
  char *pa[4] = {"CRUD", "IS", "THE", "BASIC"};
  p = &pa[0];
  printf("%c\n", *(*p + 1));              //(1)
  printf("%s\n", *(p + 2));               //(2)
  printf("%c\n", *(*(p + 3) + 3));        //(3)
  printf("%s\n", *(p+3) + 1);}            //(4)
```

4. (1) _strncmp(s, b, n)_ (2) ___strlen(s)___ (3) _____'\0'_____

(4) __i + nextEnd__ (5) _____r_____ (6) _____come_____

請完成以下程式碼，使執行結果符合輸出。(Please complete the empty space to make the execution result match the output.)

```
int findNextEnd(char *s){
  int n = 0;
  while ((s[n] != ' ') || (s[n] == '\0')){ n++;}
  return n;
}
int isBeInsertedWord(char *s, char *b){
  int n = strlen(b);
  if (( _________________ == 0) &&        // (1)
    ((s[n] == ' ') || (s[n] == '\0')))
    return 1;
  else return 0;
}
char **insertWord(char *s, char *beInsertedWord,
          char *insertingWord, int *count){
  int i = 0, index = 0, nextEnd = 0;
  int lenB = strlen(beInsertedWord);
  char **r = NULL;
  r = (char **)malloc(100 * sizeof(void *));
  int len = ___;                          // (2)
  while (i < len){
    if (isBeInsertedWord(&s[i], beInsertedWord) == 1){
      r[index++] = insertingWord;
      r[index++] = beInsertedWord;
      s[i + lenB] = ___;                  // (3)
      i = i+ lenB+1;
    }
    else{
      r[index++] = &s[i];
      nextEnd = findNextEnd(&s[i]);
      i =____;                            // (4)
      s[i++] = '\0' ; }
  }
  (*count) = index;
  return ___;                             // (5)
}
void f4(){
  char str[] = "Fuzzer come in and out Fuzzer come";
  char b[] = "____"; //(6)
  char i[] = "bear";
  char **p = NULL;
  int n = 0, j = 0;
  p = insertWord(str, b, i, &n);
  for (j = 0; j < n; j++){printf("%s ", p[j]);}
 }
```

5. (1) sumOfSquares (2) double (3) *f

請完成以下程式碼，使執行結果符合輸出。(Please complete the empty space to make the execution result match the output.)

The output of void f5():

```
0.0
16.0
```

```
double differenceOfSquares(double a, double b){
    return (a+b) * (a-b);
}
double ___(1)____(double a, double b){
    return a * a + 2 * a * b + b * b;
}
double calculate(_(2)_ f(double, double), double x, double y)
{
    double value=0;
    double fy1 = (*f)(x, y);
    double fy2 = (_(3)_)(y, x);
    value = (fy1 + fy2) / 2;
    return value;
}
void f5(){
    double x, y, (*f)(double, double);
    x = 5.2;
    y = 3.4;
    f = differenceOfSquares;
    printf("%.1f\n", calculate(f, x, y));
    x = 1.2;
    y = 2.8;
    f = sumOfSquares;
    printf("%.1f\n", calculate(f, x, y));
}
```

6. 下列程式輸出結果(The output for void f6()):

(1) 4 (2) 3 (3) 8

(4) 3 (5) 4 (6) 3 4 2 7 10

```
void f6() {
    int a[]={2, 4, 6, 8, 10};
    int *p = a;
    *(p++) = 1;
    printf("%d\n", *p);
    *(++p) = 3;
    printf("%d\n", *p);
    a[0] = (*(p++));
    printf("%d\n", *p);
    --(*(p--));
    printf("%d\n", *p);
    (*(p--))--;
    printf("%d\n", *p);
    for (int i = 0; i < 5; i++) {printf ("%d ", a[i]);}
}
```

7. 下列程式輸出結果(The output for void f7()) :

(1) Line 1: 16 (2) Line 2: 6 (3) Line 3: 12

(4) Line 4: 8 (5) Line 5: 204

```
struct on_off{
    unsigned light : 1;
    unsigned toaster : 1;
    int count;
    unsigned clock : 1;
    unsigned : 0;
    unsigned flag : 1;
} kitchen;
struct flag{
    unsigned short F1 : 10;
    unsigned short F2 : 8;
    unsigned short F3 : 6;
    unsigned short F4 : 12;
} room;
struct pig_s{
    unsigned head : 1;
    int foot;
    unsigned body : 1;
} pig;
struct cow_s{
    unsigned head : 1;
    unsigned body : 1;
    unsigned short :0;
    unsigned short foot :4;
} cow;
void f7 (){
    struct flag r;
    scanf ("%x", &r);          //輸入 cccccc
    printf("%d\n", sizeof(kitchen));
    printf("%d\n", sizeof(room));
    printf("%d\n", sizeof(pig));
    printf("%d\n", sizeof(cow));
    printf("%d\n", r.F2);
}
```

8. int*x[3][4]; 假設 x[1][3]的記憶體位址是 2048 時，則 x[2][2]的記憶體位址為多少？ (int*x[3][4]; Assuming the memory address of x[1][3] is 2048, what is the memory address of x[3][2]?)

Ans:

9. 請針對計算機程式設計課程，提出目前學習上較有問題的部分，並說明如何解決問題。(30 字含以上才計分) For the computer programming course, please point the more confusing section in the current study. Write down the problem and how to improve it. (30 words or more will be scored)