

C Programming Revision I 2018

I. Choice

1. The output of this code is “2,3,3”, which of the following input(s) is correct (C)
A. 1 3 3 B. 1 2 2 C. 2 3 2 D. 1 2 4

```
int main()
{
    int a,b,c;
    scanf("%d %d %d",&a,&b,&c);
    if (a++==1&& b++==2)
        if (c--==3||b++!=2)
            printf("%d,%d,%d\n",a,b,c);
        else printf("%d,%d,%d\n",b,c,a);
    else printf("%d,%d,%d\n",c,a,b);
    return(0);
}
```

II. Complete the following code

1. //find the biggest integer in the array and give its index
#include <stdio.h>
int main()
{
int a[10],*p,*s;
for(p=a;p-a<10;p++) scanf("%d",p);
for(p=a,s=a;p-a<10;p++) if(*p>*s) s=_____p_____;
printf("the biggest value is %d, its index is %d\n",__*s____, __s-a____);
return(0);
}

III.Run the code and give the results (as an computer)

1. The output on the screen is: ____567____ (ASCII code of ‘A’ is 65)
#include<stdio.h>
int main()
{
char*s={"ABC"};
while(*s)
{
printf("%d",*s%10);
s++;
}
return(0);
}

IV. Program design

1. For each list of words, output a line with each word reversed without changing the order of the words.

You will be given a number of test cases. The first line contains the number of cases as a positive integer. Each case is given with a line containing a list of words separated by a space, and each word contains only uppercase and lowercase letters.

Sample Input

```
3
I am happy today
To be or not to be
I want to win the practice contest
```

Sample Output

```
I ma yppah yadot
oT eb ro ton ot eb
I tnaw ot niw eht ecitcarp tsetnoc
```

1. Write a function *reverse* to reverse a given word.

```
void reverse(char* srting, int strat, int end){
    char *p,*q;
    char h;
    p = srting + end;
    q = srting + strat;
    while (p > q) {
        h = *p;
        *p-- = *q;
        *q++ = h;
    }
}
```

2. Write a function *lineChange* to deal with a String using the *reverse* function

```
void lienChnage (char *l){
    int satrt = 0;
    for (int i = 0; i < strlen(l) - 1; i++){
        if (l[i] == ' '){
            reverse(l,satrt,i-1);
            satrt = i + 1;
        }
    }
    reverse(l,start,strlen(l)-1);
}
```

3. Give the general design of your program

`scanf(n)→for→gets(s)→lienChnage(s)→printf`

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4. Give the declaration of the functions and the code of *main()*

```
int main()
{
    int n;
    scanf("%d\n",&n);
    for (int i = 1; i <= n; i++){
        char s[100];
        gets(s);
        lienChnage(s);
        printf("%s\n",s);
    }
    return 0;
}
```