

PRACTICE - C

For 4 variables a,b,c,d, *p1, *p2 type integer have addresses and values as the following table :

Variable name	Address	Value
a	2358860	2
b	2358856	3
c	2358852	4
d	2358848	5
p1	2358840	
P2	2358832	

What is the result of the following program ?

Program 1.

```
p1 = &a;  
p2 = &b;  
printf("a=%u, value=%d",&a,a);  
printf("\nb=%u, value=%d",&b,b);  
printf("\nc=%u, value=%d",&c,c);  
printf("\nd=%u, value=%d",&d,d);  
printf("\n");  
printf("\np1=%u, value=%d",&p1,*p1);  
printf("\np2=%u, value=%d",&p2,*p2);
```

Program 2

```
p1 = &b;  
p2 = &c;  
printf("\np1=%u, value=%d",p1+1,*(p1+1));  
printf("\np2=%u, value=%d",p2-1,*(p2-1));
```

Program 3

```
p1 = &b;  
p2 = &c;  
printf("\np1=%u, value=%d",p1,*p1);  
printf("\np2=%u, value=%d",p2,*p2);
```

Program 4

```
p1 = &b;  
p2 = &c;  
printf("\np1=%u, value=%d",p1-1,*(p1-1));  
printf("\np2=%u, value=%d",p2+2,*(p2+2));
```

Program 5

```
p1 = &b;  
p2 = &c;  
printf("\np1=%u, value=%d",p1-1,*(p1-1));  
printf("\np2=%u, value=%d",p2+2,*(p2+2));
```

Program 6

```
p1 = &c;  
p2 = &b;  
p1--;  
p2++;  
printf("\np1=%u, value=%d",p1,*p1);  
printf("\np2=%u, value=%d",p2,*p2);
```

Program 7

```
p1 = &b;  
p2 = &c;  
p1++;  
p2--;  
printf("\nvalue1=%d",*p1);  
printf("\nvalue2=%d",*p2);
```

Program 8

```
p1 = &b;  
p2 = &c;  
*p1 = ++d;  
*p2 = *p1 + a ;  
printf("a=%d,b=%d,c=%d,d=%d",a,b,c,d);
```

Program 9

```

p1 = &a;
p2 = &b;
*p1 = *(p2+1) + d;
*p2 = *p1 + a ;
c = *p1 + *(p2-2);
d = *(p1-1) + c;
printf("a=%d,b=%d,c=%d,d=%d",a,b,c,d);

```

Program 10

```

void getValue(int* a,int b,int *c, int d){
    *a = b+d;
    *c += *a;
    d = *a + *c;
    b = *a - *c;
}
main()
{
    int x= 1,y = 2, z= 3,t = 4;
    getValue(&x,y,&t,z);
    printf("x=%d, y=%d, z=%d, t=%d\n",x, y, z,t);
}

```

Program 11

```

void getValue(int* a,int b,int *c, int d){
    *a = *c + 1;
    *c += *a + b;
    d = b + *c;
    b = *a + d;
}
main()
{
    int x= 1,y = 2, z= 3,t = 4;
    getValue(&y,z,&x,t);
    printf("x=%d, y=%d, z=%d, t=%d\n",x, y, z,t);
}

```

Program 12

```
void getValue(int* a,int b,int *c, int d){
    *a += b;
    a = &d;
    *c = *a + b;
    d = b + *c;
    b = *a + d;
}
main()
{
    int x= 1,y = 2, z= 3,t = 4;
    getValue(&x,y,&z,t);
    printf("x=%d, y=%d, z=%d, t=%d\n",x, y, z,t);
}
```

Program 13

```
void getValue(int *a,int *b,int *c, int *d){
    *a = *b - *c;
    *c = *d + *b;
    *d = *a - *c;
    *b = *c + *d;
}
main()
{
    int x= 1,y = 2, z= 3,t = 4;
    getValue(&x,&z,&t,&x);
    printf("x=%d, y=%d, z=%d, t=%d\n",x, y, z,t);
}
```

Program 14

```
void getValue(int *a,int b,int *c, int d){
    b = *a + d;
    *a = *c + b;
    d = *c - *a;
    *c = d + *a;
}
main()
{
    int x= 1,y = 2, z= 3,t = 4;
    getValue(&x,z,&t,y);
    printf("x=%d, y=%d, z=%d, t=%d\n",x, y, z,t);
}
```