CHAPTER

ELEVEN

Data Types Revisited

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[A] What will be the output of the following programs:
     # include <stdio.h>
(a)
     int main()
        int i;
        for (i = 0; i \le 50000; i++)
                                                             001=1
             printf ( "%d\n", i );
                                          onnif ( vals i = %d/n' i i :
        return 0;
     Output:
                                                           Wit - I allow
     50000
(b)
     # include <stdio.h>
                                                              fini) Mai
                                                            : ( Mil' p tri
     int main().
        float a = 13.5;
        double b = 13.5;
        printf ( "%f %lf\n", a, b );
        return 0;
```

Output:

13.500000 13.500000

```
# include <stdio.h>
(c)
     int i = 0;
     void val();
     int main()
        printf ("main's i = %d\n", i);
        i++;
        val();
        printf ("main's i = %d\n", i);
        val();
        return 0;
     void val()
        i = 100;
        printf ( "val's i = %d\n", i);
         i++;
     }
     Output:
     main's i = 0
     val's i = 100
     main's i = 101
     val's i = 100
(d)
     # include <stdio.h>
     int f (int);
     int g (int);
     int main()
        int x, y, s = 2;
        s = 3;
        y = f(s);
        x = g(s);
```



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printf ( "%d %d %d\n", s, y, x );
         return 0;
     int t = 8;
     intf(inta)
        a += -5;
        t=4;
        return (a+t);
     int g (int a)
        a=1;
        t += a;
        return (a+t);
    Output:
    6 5 6
(e)
    # include <stdio.h>
    int main()
       static int count = 5;
       printf ( "count = %d\n", count-- );
       if (count != 0)
           main();
       retum 0;
   Output:
   count = 5
   count = 4
   count = 3
   count = 2
   count = 1
```

```
The state of the s
                            # include <stdio.h>
(1)
                            int g (int);
                             int main()
                                                int i, j;
                                              tor (i=1;i<5;i++)
                                                                     j=g(i);
                                                                     printf ( "%d\n", j );
                                              retum 0;
                           int g (int x)
                                              static int v = 1;
                                              int b=3;
                                              V += X;
                                              return (v+x+b);
                           1
                            Output:
                           6
                           9
                                                                                                                                                                                                                                                                                       rinclude catdio.htm
                            13
                             18
                                                                                                                                                                                                                                                            S = knego ini pilale
                          # include <stdio.h>
                                                                                                                                                                               Count (-mos and section) sound
                           int main()
                                                                                                                                                                                                                                                                                              Dai Muss In
                                           func();
                                           func();
                                           return 0;
                           void func()
                                                                                                                                                                                                                                                                                                                                            Jugar()
                                            auto int i=0;
                                                                                                                                                                                                                                                                                                                                          8 = MUOD
                                           register int j = 0;
                                                                                                                                                                                                                                                                                                                                        r = 10000
```

```
static int k = 0;
       i++; j++; k++;
       printf ( "%d %d %d\n", i, j, k );
    Output:
    111
    112
                                                        rom3 oV.
    # include <stdio.h>
(h)
    int x = 10;
    int main()
                                              : 89 = 6 bendians
       int x = 20;
           int x = 30:
           printf ( "%d\n", x );
of Surriprintf ("%d\n",x); bear of bluods also accord some
       return 0;
                                                         I hosen m
    Output:
                                       iong foot a = 15 bd9e454
    30
                                         25 = claiged toncens
    20
[B] Point out the errors, if any, in the following programs:
(a)
    # include <stdio.h>
                   Error, Former, Wife about bound for by
    int main()
                                                cholitics exhibited (9)
       long num;
       num = 2;
       printf ( "%d\n", num );
       return 0;
                                                       O multar
    No Error
```

(h) The default value for automatic variable is zero.

Answer: False

(i) The life of static variable is till the control remains with the block in which it is defined. elo gentuk islangui a kii suatoi?

Answer: False

(j) If a global variable is to be defined, then the exten keyword is necessary in its declaration.

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Answer: False

- (k) The address of register variable is not accessible. Answer: True
- (1) A variable that is defined outside all functions can als have a static storage class. The have a static storage Answer: True

(m) One variable can have multiple storage classes. Answer False Answer: False bottom and addition and the second and addition and a second and a se

(c) The remains storings class variety can appear them

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