

```
1  #include <stdio.h>
2
3  #define NUM_ELEMENTS 10
4
5  int main(void)
6  {
7      //variable declarations
8      int iArray[NUM_ELEMENTS];
9      int i, num, j, count = 0;
10
11     //code
12     printf("\n\n");
13
14     // *** ARRAY ELEMENTS INPUT ***
15     printf("Enter Integer Elements For Array : \n\n");
16     for (i = 0; i < NUM_ELEMENTS; i++)
17     {
18         scanf("%d", &num);
19
20         // If 'num' is negative ( < 0 ), then convert it to positive (multiply by -1)
21         if (num < 0)
22             num = -1 * num;
23
24         iArray[i] = num;
25     }
26
27     // *** PRINTING ENTIRE ARRAY ***
28     printf("\n\n");
29     printf("Array Elements Are : \n\n");
30     for (i = 0; i < NUM_ELEMENTS; i++)
31         printf("%d\n", iArray[i]);
32
33     // *** SEPARATING OUT EVEN NUMBERS FROM ARRAY ELEMENTS ***
34     printf("\n\n");
35     printf("Prime Numbers Amongst The Array Elements Are : \n\n");
36     for (i = 0; i < NUM_ELEMENTS; i++)
37     {
38         for (j = 1; j <= iArray[i]; j++)
39         {
40             if ((iArray[i] % j) == 0)
41                 count++;
42         }
43
44         // NUMBER 1 IS NEITHER A PRIME NUMBER NOR A CONSONANT
45         // IF A NUMBER IS PRIME, IT IS ONLY DIVISIBLE BY 1 AND ITSELF.
46         // HENCE, IF A NUMBER IS PRIME, THE VALUE OF 'count' WILL BE EXACTLY 2.
47         // IF THE VALUE OF 'count' IS GREATER THAN 2, THE NUMBER IS DIVISIBLE BY
48         // NUMBERS OTHER THAN 1 AND ITSELF AND HENCE, IT IS NOT PRIME
49         // THE VALUE OF 'count' WILL BE 1 ONLY IF iArray[i] IS 1.
50         if (count == 2)
            printf("%d\n", iArray[i]);
```

---

```
51
52     count = 0; //RESET 'count' TO 0 FOR CHECKING THE NEXT NUMBER...
53 }
54
55 return(0);
56 }
57
58
```