

...cont'd

- 5 Next, define the second custom function to call a regular function from a received function pointer, and pass it a received integer value

```
int caller( int (*function)(int), int b )  
{  
    return (*function)(b);  
}
```

- 6 Back in the main function block, assign a value to the integer variable by calling the regular function via the function pointer, and output the value it returns

```
num = (*fptr)(10);  
printf( "Returned Value: %d\n" , num ) ;
```

- 7 Now, assign a new value to the integer variable by passing the function pointer and an integer to another function, which in turn calls the regular function, then output the value it returns

```
num = caller( fptr, 5 ) ;  
printf( "Returned Value: %d\n", num ) ;
```

- 8 At the end of the main function block, return a zero integer value, as required by the function declaration

```
return 0 ;
```

- 9 Save the program file, then compile and execute the program to see the values output via function pointers

```
Command Prompt  
C:\MyPrograms>gcc fcnptr.c -o fcnptr.exe  
C:\MyPrograms>fcnptr  
Received Value: 10  
Returned Value: 33  
  
Received Value: 5  
Returned Value: 18  
C:\MyPrograms>
```



The first argument to the **caller()** function in this example may be a pointer to any function that receives one integer argument and returns an integer value – as specified in the prototype declaration.



Like other pointers in C programming, a function pointer simply stores a memory address. When a function pointer is dereferenced with ***** the function at that address to which the pointer points gets called.