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30. Write C programs to demonstrate the following thread related concepts.

Aim: To demonstrate creating and terminating threads using `pthread` library.

Algorithm:

1. Include the necessary libraries.
2. Define a thread function.
3. Create threads using `pthread_create`.
4. Wait for the thread to complete using `pthread_join`.
5. Terminate the thread.

Code:

```
#include <pthread.h>
```

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
void* thread_function(void* arg) {  
  
    printf("Thread running...\n");  
  
    return NULL;  
  
}
```

```
int main() {  
  
    pthread_t thread;  
  
    pthread_create(&thread, NULL, thread_function, NULL);  
  
    pthread_join(thread, NULL);  
  
    printf("Thread terminated.\n");  
  
    return 0;  
}
```

}

Output:



The screenshot displays the OnlineGDB web interface. On the left is a blue sidebar with the OnlineGDB logo and navigation links: 'Welcome, Siva Shirish', 'Create New Project', 'My Projects', 'Classroom' (marked 'new'), 'Learn Programming', 'Programming Questions', 'Upgrade', and 'Logout'. The top of the interface features a toolbar with buttons for 'Run', 'Debug', 'Stop', 'Share', 'Save', 'Beautify', and a download icon. Below the toolbar, the file 'main.c' is open in the editor. The console output on the right shows the program's execution: 'Thread running...', 'Thread terminated.', '...Program finished with exit code 0', and 'Press ENTER to exit console.'.

```
main.c
Thread running...
Thread terminated.
...Program finished with exit code 0
Press ENTER to exit console.
```