

Duplicate Movie Exception:

The screenshot shows a C++ IDE with a project named 'Project3'. The Run window displays the output of a program. The program has a menu-driven interface with the following options:

```

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
am
Please enter a movie code:
Movie1
Please enter a movie name:
Movie1
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
am
Please enter a movie code:
movie1
Please enter a movie name:
Movie1
Exception Caught: You are trying to add a movie, but that movie already exists...

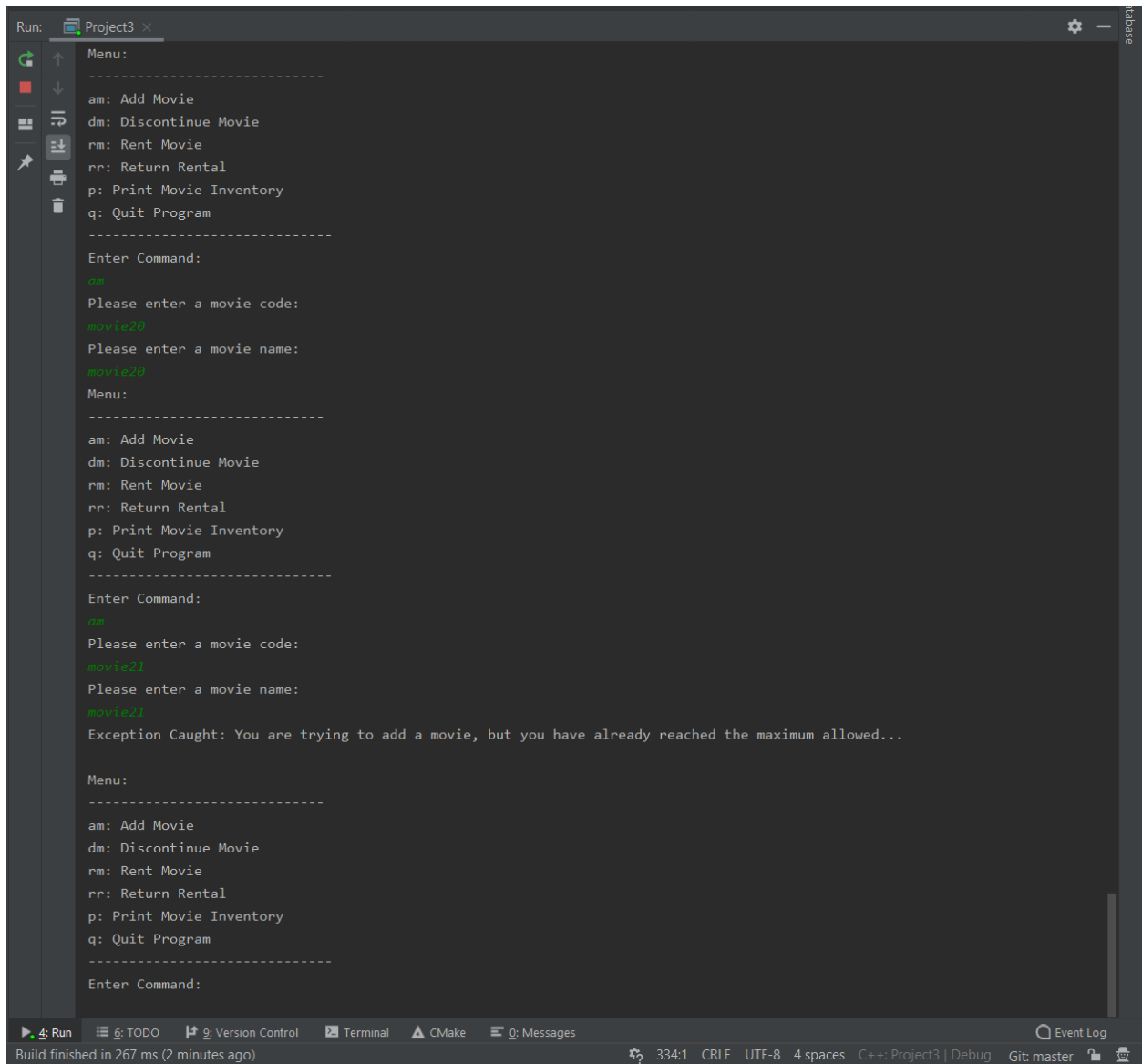
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:

```

The IDE interface includes a sidebar with 'Run', 'Favorites', and 'Structure' views. The bottom status bar shows 'Build finished in 351 ms (a minute ago)' and various settings like '46:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master'.

Movie Limit Exception:



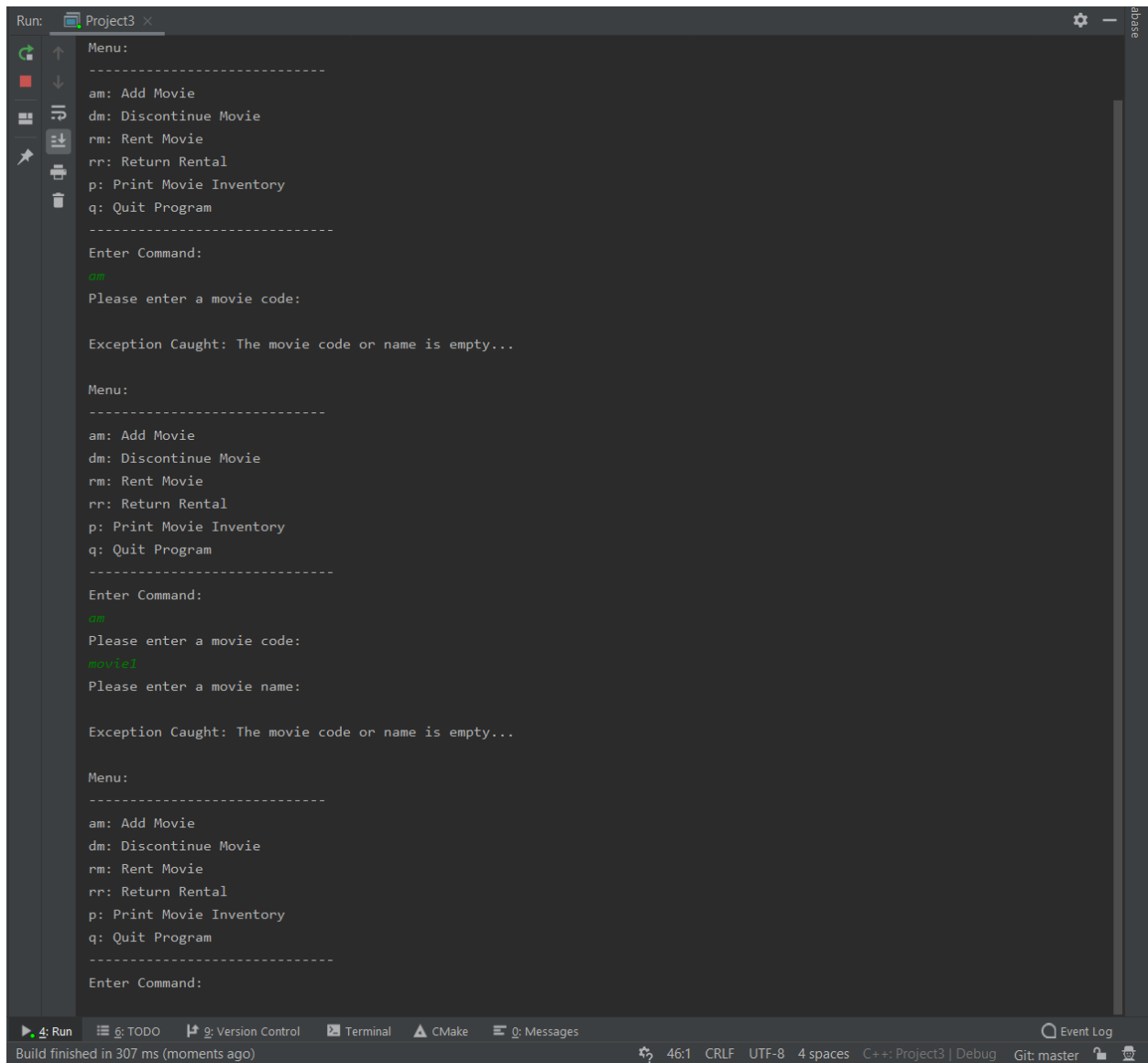
```
Run: Project3 x
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
am
Please enter a movie code:
movie2
Please enter a movie name:
movie2
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
am
Please enter a movie code:
movie2
Please enter a movie name:
movie2
Exception Caught: You are trying to add a movie, but you have already reached the maximum allowed...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
```

Build finished in 267 ms (2 minutes ago)

334:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

Empty Movie Info Exception:



```
Run: Project3 x
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
am
Please enter a movie code:

Exception Caught: The movie code or name is empty...

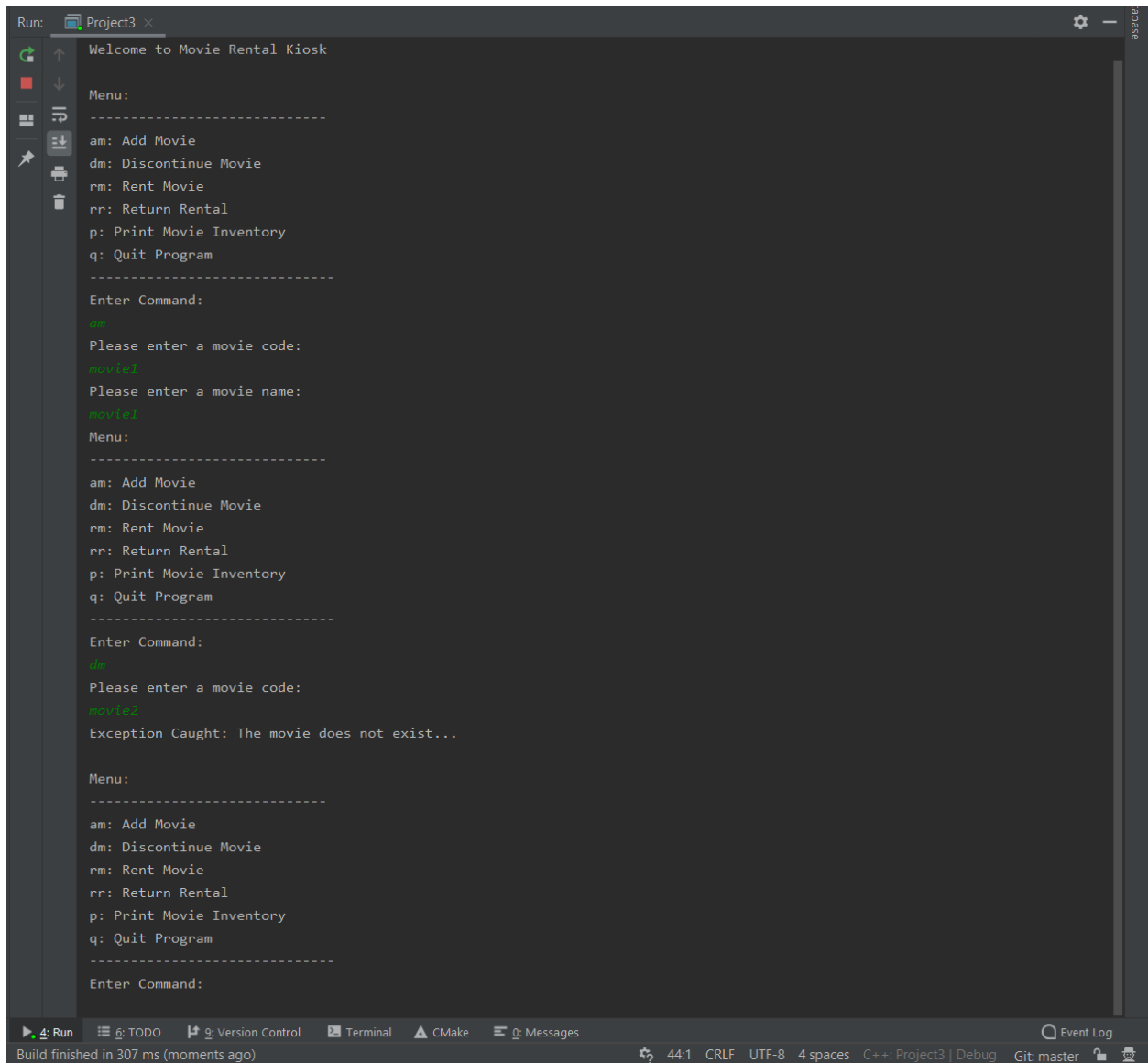
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
am
Please enter a movie code:
movie1
Please enter a movie name:

Exception Caught: The movie code or name is empty...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
```

Build finished in 307 ms (moments ago) 46:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

Movie Not Found Exception:



```
Run: Project3 x
Welcome to Movie Rental Kiosk

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
am
Please enter a movie code:
movie1
Please enter a movie name:
movie1
Menu:
-----

am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
dm
Please enter a movie code:
movie1
Exception Caught: The movie does not exist...

Menu:
-----

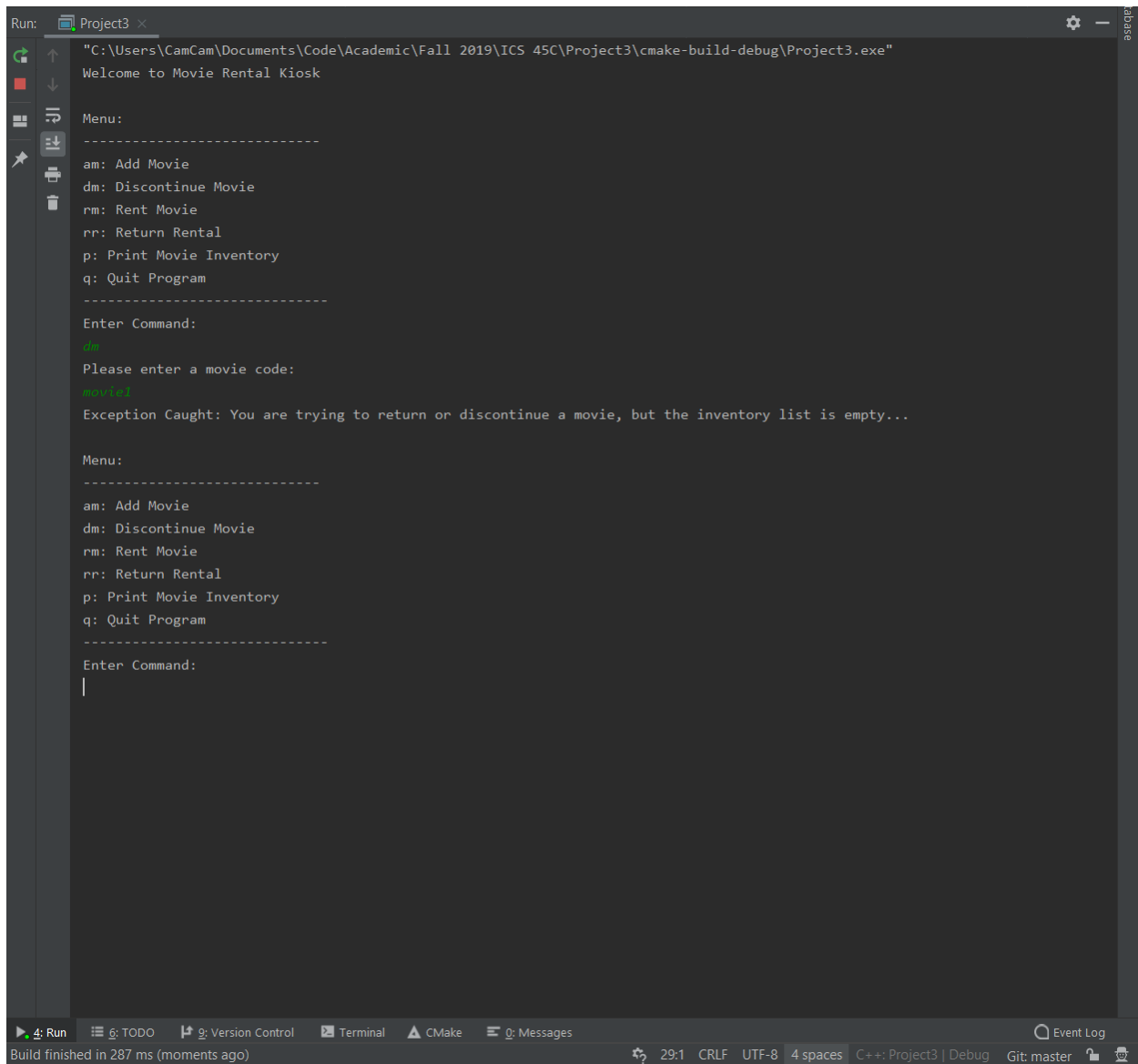
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
```

4: Run | TODO | Version Control | Terminal | CMake | Messages | Event Log

Build finished in 307 ms (moments ago) | 44:1 CRLF UTF-8 4 spaces C++: Project3 | Debug | Git: master

Empty Movie List Exception:



```
Run: Project3 x
"C:\Users\CamCam\Documents\Code\Academic\Fall 2019\ICS 45C\Project3\cmake-build-debug\Project3.exe"
Welcome to Movie Rental Kiosk

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
dm
Please enter a movie code:
movie(x)
Exception Caught: You are trying to return or discontinue a movie, but the inventory list is empty...

Menu:
-----

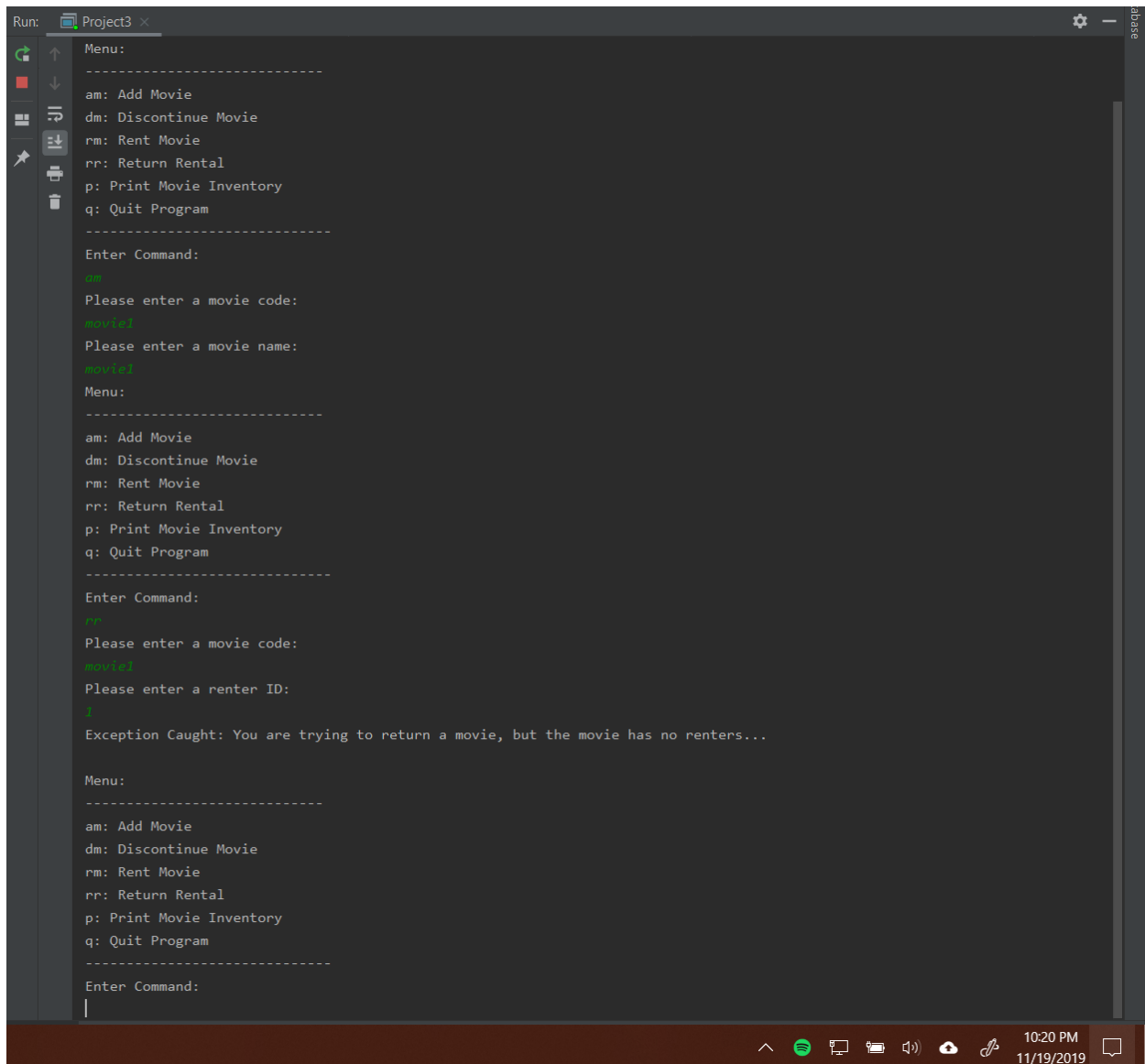
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
|
```

Build finished in 287 ms (moments ago)

29:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

Empty Renter List Exception:

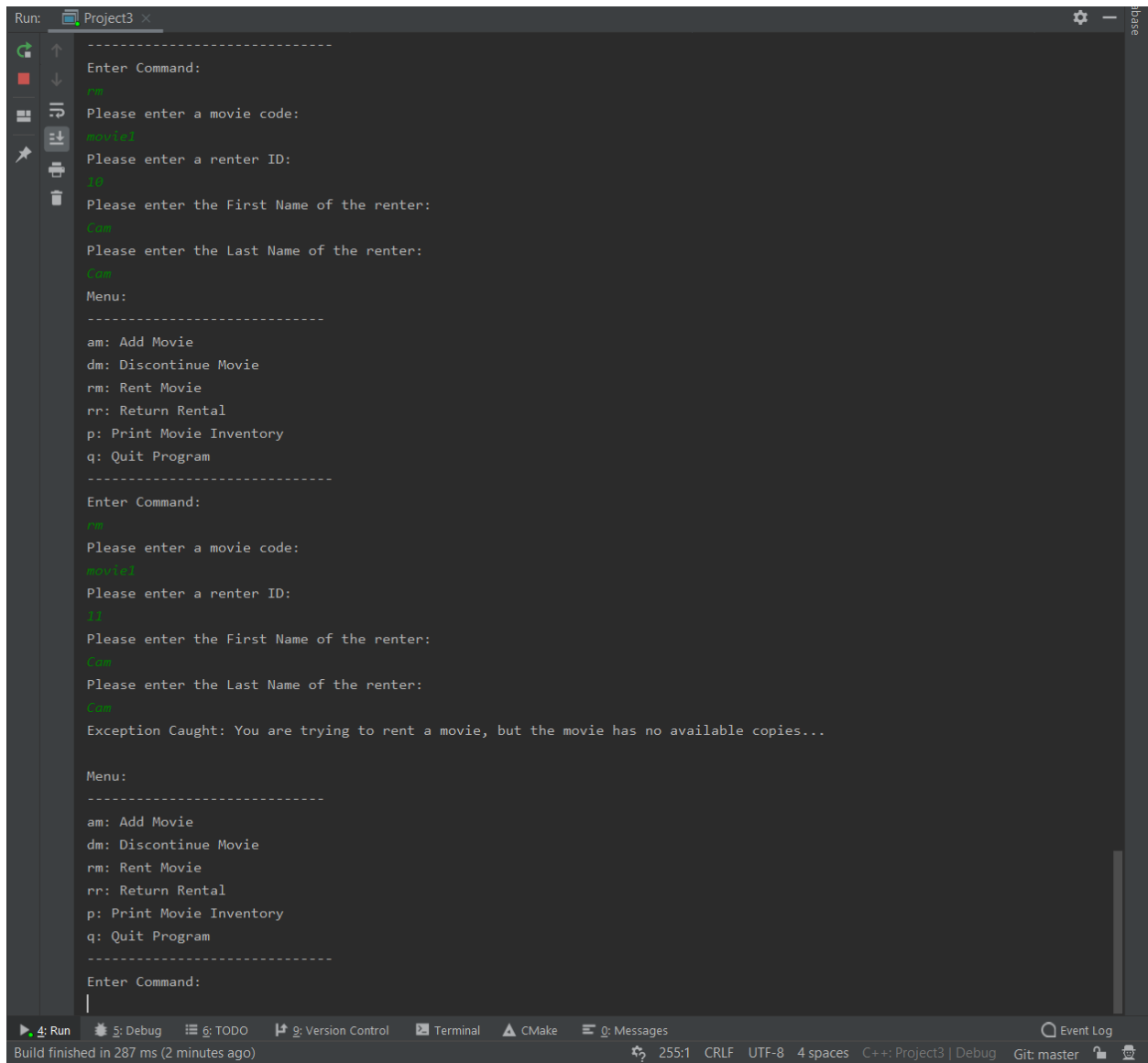


The screenshot shows a Java IDE window titled "Run: Project3". The main text area displays the output of a program. The program has a menu with options: am: Add Movie, dm: Discontinue Movie, rm: Rent Movie, rr: Return Rental, p: Print Movie Inventory, and q: Quit Program. The user enters 'am' and provides movie details. Then, they enter 'rr'. The program prompts for a movie code and a renter ID. The user enters 'movie1' for the movie code and an empty line for the renter ID. An exception is caught and displayed: "Exception Caught: You are trying to return a movie, but the movie has no renters...". The program then displays the menu again and prompts for a command. The user has entered a single character, likely 'q'.

```
Run: Project3 x
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
am
Please enter a movie code:
movie1
Please enter a movie name:
movie1
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rr
Please enter a movie code:
movie1
Please enter a renter ID:
|
Exception Caught: You are trying to return a movie, but the movie has no renters...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
|
```

Renter Limit Exception:



```
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
11
Please enter the First Name of the renter:
Cass
Please enter the Last Name of the renter:
Cass
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
11
Please enter the First Name of the renter:
Cass
Please enter the Last Name of the renter:
Cass
Exception Caught: You are trying to rent a movie, but the movie has no available copies...

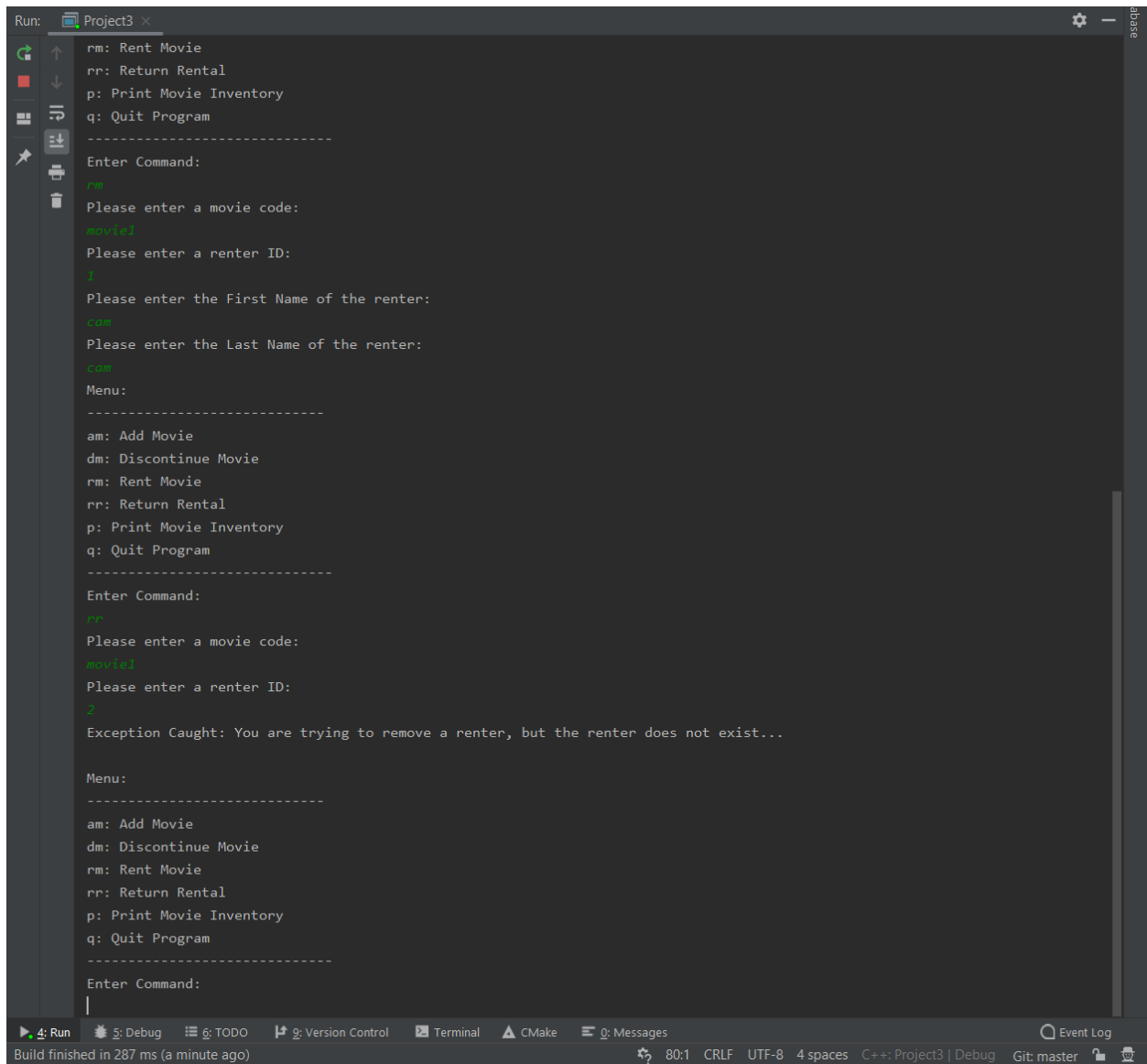
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
|
```

Run: Project3 x

Build finished in 287 ms (2 minutes ago)

255:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

Renter Not Found Exception:



The screenshot shows a C++ IDE with a terminal window titled "Run: Project3". The terminal displays the following sequence of events:

```
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
1
Please enter the First Name of the renter:
cos
Please enter the Last Name of the renter:
cos
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
2

Exception Caught: You are trying to remove a renter, but the renter does not exist...

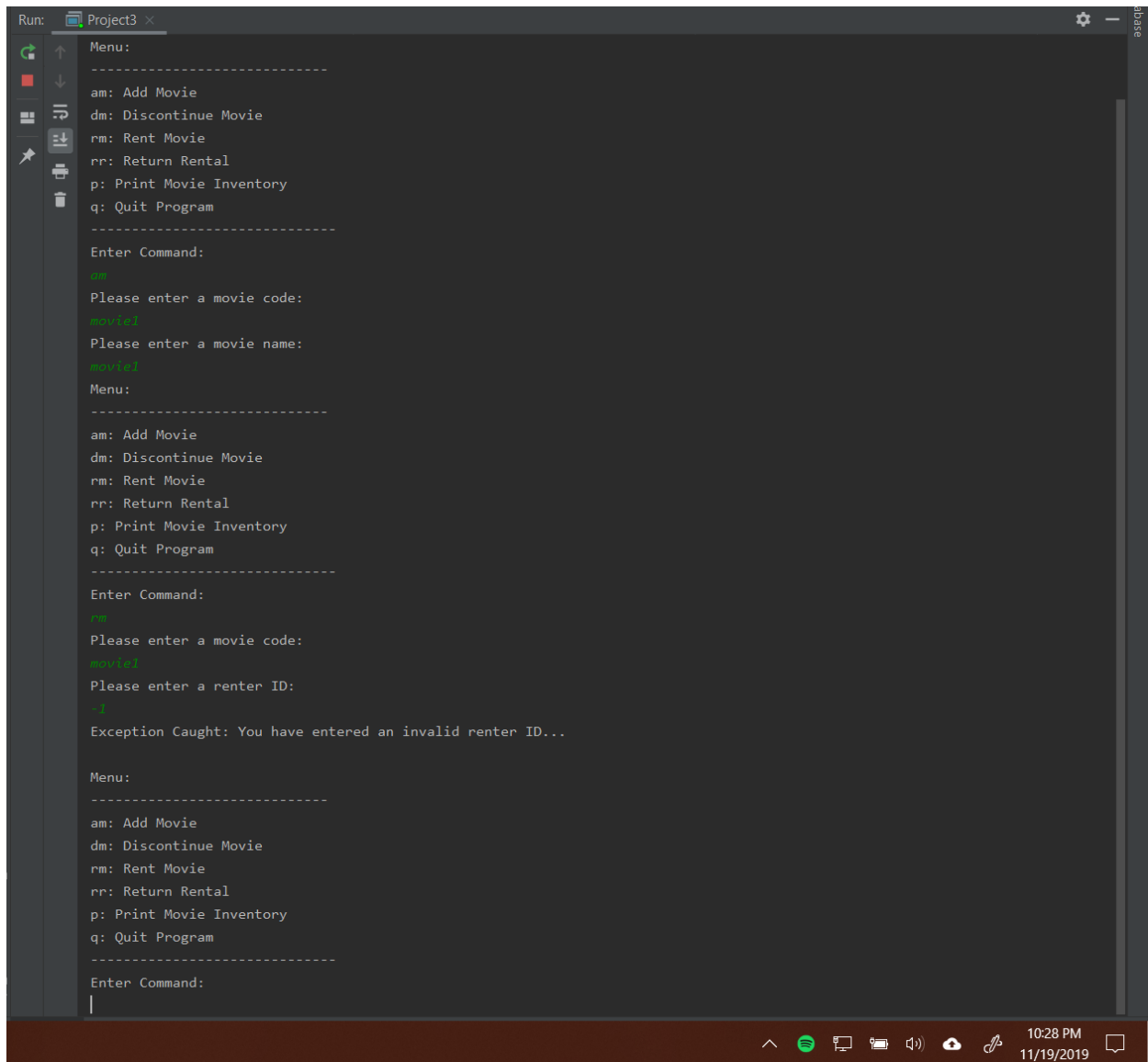
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
|
```

The IDE interface includes a sidebar with icons for Run, Debug, TODO, Version Control, Terminal, CMake, Messages, and Event Log. The status bar at the bottom indicates "Build finished in 287 ms (a minute ago)", "80:1 CRLF UTF-8 4 spaces", and "C++: Project3 | Debug Git: master".

Duplicate Renter Exception:

[illegible]

Invalid Renter ID Exception:

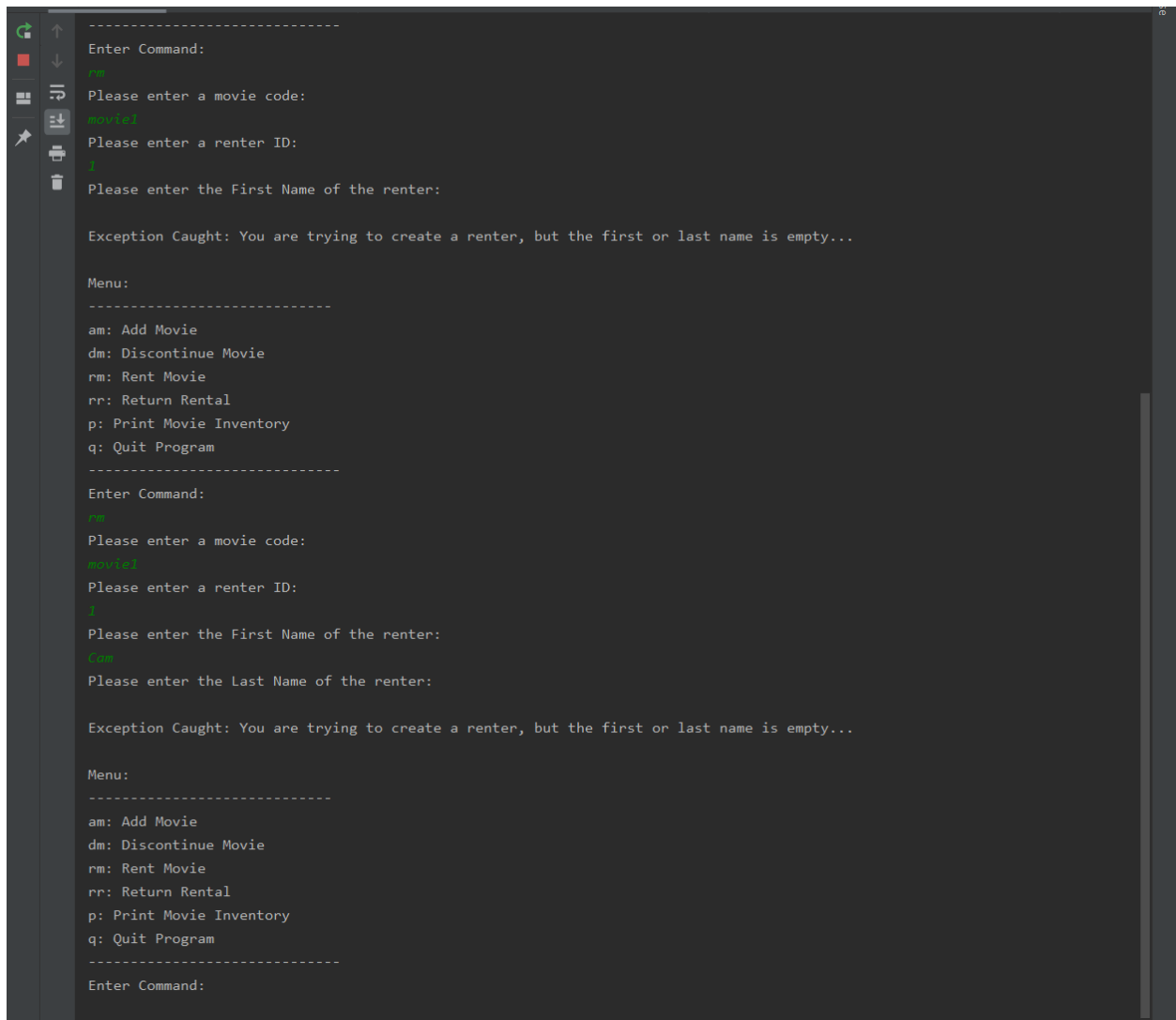


The screenshot shows a Java IDE window titled "Run: Project3". The main editor area displays the output of a program. The program has a menu with options: am: Add Movie, dm: Discontinue Movie, rm: Rent Movie, rr: Return Rental, p: Print Movie Inventory, and q: Quit Program. The user enters 'am' and then 'movie1' for both movie code and name. The menu is shown again. The user enters 'rm' and then 'movie1' for movie code. When prompted for a renter ID, the user enters '1'. An exception is caught and displayed: "Exception Caught: You have entered an invalid renter ID...". The menu is shown again, and the user is prompted to enter a command. The taskbar at the bottom shows the time as 10:28 PM on 11/19/2019.

```
Run: Project3 x
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
am
Please enter a movie code:
movie1
Please enter a movie name:
movie1
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
1
Exception Caught: You have entered an invalid renter ID...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
|
```

Empty Renter Name Exception:



```
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
1
Please enter the First Name of the renter:

Exception Caught: You are trying to create a renter, but the first or last name is empty...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

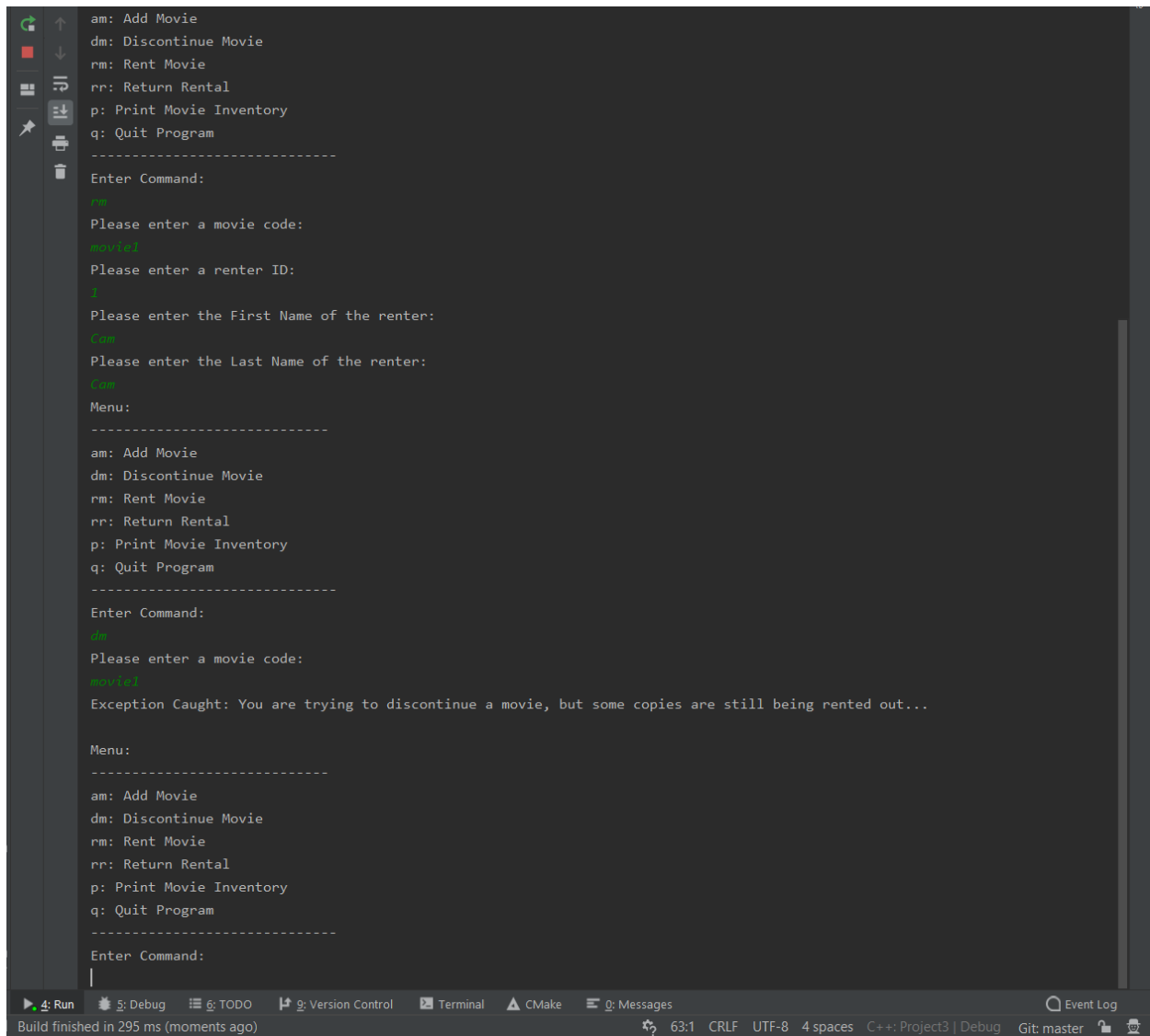
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
1
Please enter the First Name of the renter:
Joe
Please enter the Last Name of the renter:

Exception Caught: You are trying to create a renter, but the first or last name is empty...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
```

Rented Movie Exception:

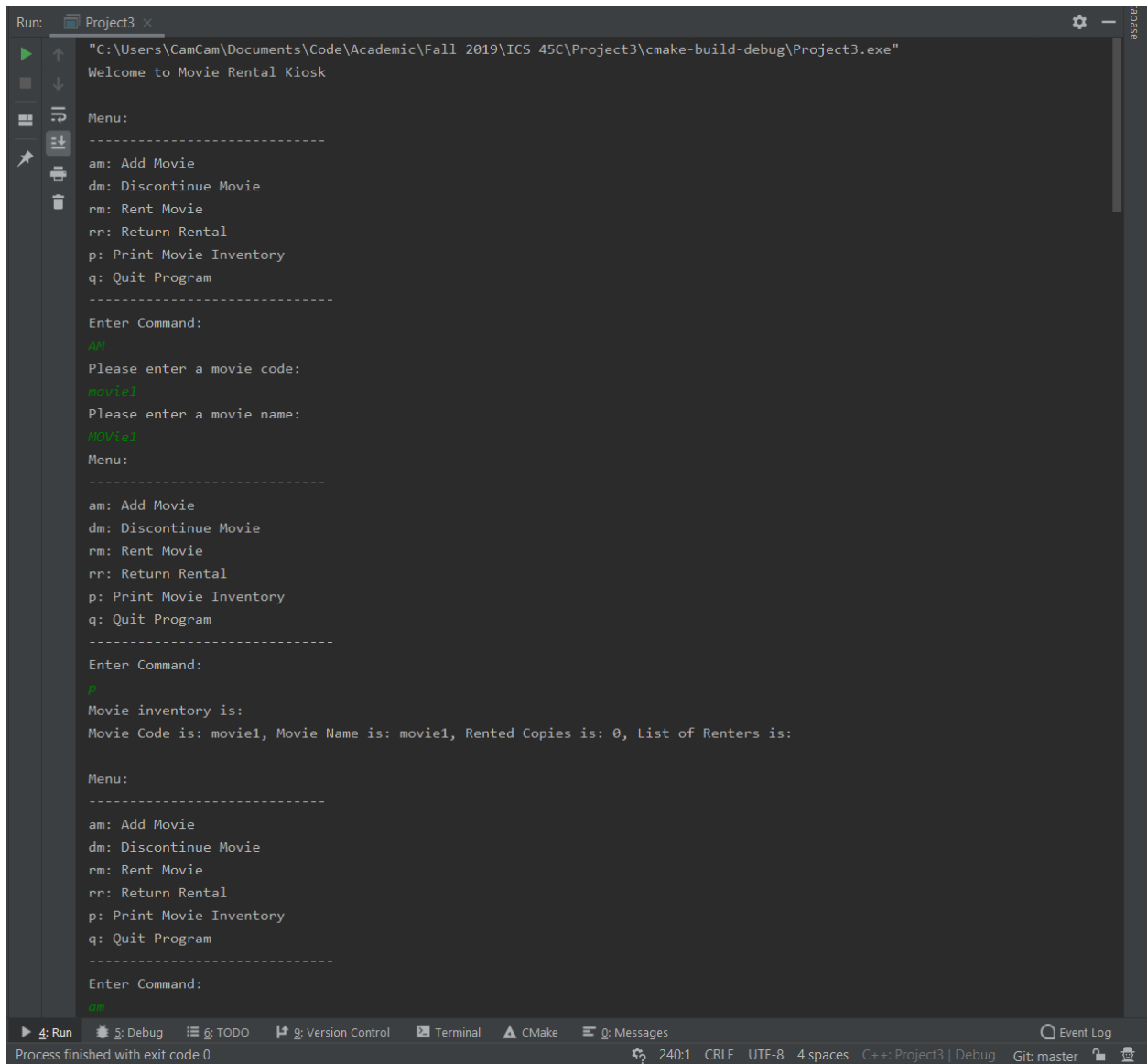


```
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie1
Please enter a renter ID:
1
Please enter the First Name of the renter:
Cam
Please enter the Last Name of the renter:
Cam
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
dm
Please enter a movie code:
movie1
Exception Caught: You are trying to discontinue a movie, but some copies are still being rented out...

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
|
```

The screenshot shows a C++ IDE with a terminal window. The program is a movie rental management system. It has a menu with options: am: Add Movie, dm: Discontinue Movie, rm: Rent Movie, rr: Return Rental, p: Print Movie Inventory, and q: Quit Program. The user enters 'rm' to rent a movie. They enter 'movie1' as the movie code and '1' as the renter ID. They enter 'Cam' for both the first and last names of the renter. The program then displays the menu again. The user enters 'dm' to discontinue a movie. They enter 'movie1' as the movie code. An exception is caught and displayed: 'Exception Caught: You are trying to discontinue a movie, but some copies are still being rented out...'. The program then displays the menu again. The user enters a vertical bar '|' at the prompt.

General Program Flow:



The screenshot shows a CMake IDE terminal window titled "Run: Project3". The terminal output displays the execution of a program named "Project3.exe". The program starts with a "Welcome to Movie Rental Kiosk" message and presents a menu with options: am: Add Movie, dm: Discontinue Movie, rm: Rent Movie, rr: Return Rental, p: Print Movie Inventory, and q: Quit Program. The user enters 'am' to add a movie, followed by 'movie1' for the movie code and 'MOVIE1' for the movie name. The menu is shown again, and the user enters 'p' to print the movie inventory. The output shows: "Movie inventory is: Movie Code is: movie1, Movie Name is: movie1, Rented Copies is: 0, List of Renters is:". The menu is shown a third time, and the user enters 'q' to quit the program. The terminal status bar at the bottom indicates "Process finished with exit code 0" and shows various IDE settings like "240:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master".

```
Run: Project3 x
"C:\Users\CamCam\Documents\Code\Academic\Fall 2019\ICS 45C\Project3\cmake-build-debug\Project3.exe"
Welcome to Movie Rental Kiosk

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
am

Please enter a movie code:
movie1
Please enter a movie name:
MOVIE1
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
p

Movie inventory is:
Movie Code is: movie1, Movie Name is: movie1, Rented Copies is: 0, List of Renters is:

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
q
```

4: Run 5: Debug 6: TODO 7: Version Control 8: Terminal 9: CMake 10: Messages Event Log

Process finished with exit code 0 240:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

```
Run: Project3 x
am
Please enter a movie code:
movie2
Please enter a movie name:
MOVIE2
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
p
Movie inventory is:
Movie Code is: movie1, Movie Name is: movie1, Rented Copies is: 0, List of Renters is:

Movie Code is: movie2, Movie Name is: movie2, Rented Copies is: 0, List of Renters is:

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
dm
Please enter a movie code:
movie1
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
```

```
Run: Project3 x
Movie inventory is:
Movie Code is: movie2, Movie Name is: movie2, Rented Copies is: 0, List of Renters is:

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
rm
Please enter a movie code:
movie2
Please enter a renter ID:
1
Please enter the First Name of the renter:
Cameron
Please enter the Last Name of the renter:
Sherry
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
p
Movie inventory is:
Movie Code is: movie2, Movie Name is: movie2, Rented Copies is: 1, List of Renters is:
[ID: 1, Last Name: sherry, First Name: cameron]

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
```

4: Run 5: Debug 6: TODO 7: Version Control 8: Terminal 9: CMake 0: Messages Event Log

Process finished with exit code 0 240:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

```
Run: Project3 x
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
rm
Please enter a movie code:
movie2
Please enter a renter ID:
2
Please enter the First Name of the renter:
Bameron
Please enter the Last Name of the renter:
Sherry
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----

Enter Command:
p
Movie inventory is:
Movie Code is: movie2, Movie Name is: movie2, Rented Copies is: 2, List of Renters is:
[ID: 1, Last Name: sherry, First Name: cameron]
[ID: 2, Last Name: sherry, First Name: bameron]

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
```

Process finished with exit code 0

240:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master


```
Run: Project3 x
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie2
Please enter a renter ID:
3
Please enter the First Name of the renter:
Albert
Please enter the Last Name of the renter:
Albertus
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
p
Movie inventory is:
Movie Code is: movie2, Movie Name is: movie2, Rented Copies is: 3, List of Renters is:
[ID: 3, Last Name: albertus, First Name: albert]
[ID: 1, Last Name: sherry, First Name: cameron]
[ID: 2, Last Name: sherry, First Name: bameron]

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rm
Please enter a movie code:
movie2
```

4: Run Debug TODO Version Control Terminal CMake Messages Event Log

Process finished with exit code 0 240:1 CRLF UTF-8 4 spaces C++: Project3 | Debug Git: master

```
Run: Project3 x
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
rr
Please enter a movie code:
movie2
Please enter a renter ID:
1
Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
p
Movie inventory is:
Movie Code is: movie2, Movie Name is: movie2, Rented Copies is: 2, List of Renters is:
[ID: 3, Last Name: albertus, First Name: albert]
[ID: 2, Last Name: sherry, First Name: bameron]

Menu:
-----
am: Add Movie
dm: Discontinue Movie
rm: Rent Movie
rr: Return Rental
p: Print Movie Inventory
q: Quit Program
-----
Enter Command:
q

Process finished with exit code 0
```