

## CHECKLIST OF BBM104 SPRING 2025 PROJECT ASSIGNMENT 4

Please try the following test cases and drop your notes under each bullet point in **BLUE** color. You can see some examples below:

- Check that functionality x works.  
**This functionality works like a charm.**
- Check that functionality y works.  
**This functionality has some flaws, the system crashes when it is tried to do operation namely t.**
- Check that functionality z works.  
**This functionality does not work at all.**

You can add extra test cases please insert them as in RED color, your notes are still in BLUE. This paper is also for noting which parts of your system does not work well, so you can create hypothetic test cases that make your system not respond as it has to and explain the problem.

### Test Cases

- Contents of the assets folder must be the same as the one provided at Piazza.  
**This functionality works like a charm.**
- Open the terminal at your main folder (the folder that your code needs to be compiled and run)  
**This functionality works like a charm.**
- Run the following commands:
  - o javac -version (must be resulted same as "javac 1.8.0\_xxx")  
**This functionality works like a charm.**
  - o java -version (must be resulted same as "java version "1.8.0\_xxx"")  
**This functionality works like a charm.**
- Compile your code and then run it.  
**This functionality works like a charm.**
- Show that the game opens without any crash. Your system must also read the assets by itself.  
**This functionality works like a charm.**
- Show that Player movement and shooting works correctly. The player tank should be correctly controlled with the movement buttons and it should fire correctly with the "x" button. Firing should not look erratic(no shooting rapid fire with no wait time). Tank movement should be accompanied by a simple animation of the tank using the images provided.  
**This functionality works like a charm.**

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Link of the Demo Video : <https://youtu.be/jPGdQUonQpw?si=hPHGFaruDMSkIdII>

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- Show that Enemy movement and shooting works correctly. Enemies should move randomly or semi randomly and they should shoot at semi random intervals. Keep in mind that tanks should not move too erratically(constantly changing directions multiple times in a single second) and they should not be able to fire again right after firing. Enemies should spawn correctly.  
*This functionality works like a charm.*
- Show that bullets behave correctly. Bullets should hit and destroy the correct type of tanks depending on who fires them. Bullet hit should be accompanied by appropriate explosion image.  
*If the bullets are between our tank and the enemy's tank, they will explode or destroy, but the enemy tanks cannot harm each other. Logically, being allies can make it seem appropriate that they cannot harm each other.*
- Show that walls are implemented. Walls should prevent tanks from passing through and cause bullets to disappear. There should be walls surrounding the map and inside the area itself.(You can place them as you wish)  
*This functionality works like a charm.*
- Scoring works correctly and lives decrease as necessary.  
*This functionality works like a charm.*
- Pause menu works correctly. Game can be resumed or closed or restarted.  
*This functionality works like a charm.*
- Game Over triggers correctly and Game Over Menu works correctly. Game can be closed or restarted.  
*This functionality works like a charm.*

### EXTRAS

- **Walls located within the map.**  
*The destructible walls in the interior can be destroyed by shooting, they were added intentionally to increase the gaming pleasure.*

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## Listed Version

### Completed Features:

- - The game starts successfully - the player can move in four directions.
- - The player can shoot using the "X" key.
- - Enemy tanks move in random directions.
- - Enemies shoot at random intervals, bullets travel at a constant speed.
- - Impassable outer walls are correctly implemented.
- - When the player's bullet hits an enemy, the enemy is destroyed with an explosion effect.
- - The score is updated in the top-left corner.
- - The player has 3 lives and loses one when hit.
- - After being hit, the player respawns at the starting position.
- - The Game Over screen works correctly, and the game can be restarted with "R" or exited with "Escape".
- - Pause menu opens with "P" (disabled during Game Over screen).
- - Explosion effects are applied.
- - Breakable inner walls can be destroyed by bullets.
- - Walls produce small explosion effects when hit by bullets.
- Tanks can move and shoot at the same time.

### Extra Features:

- - If the player fires too frequently, a warning appears and shooting is disabled for 2 seconds.
- - A start screen is shown when the game launches.
- - The number of enemy tanks increases over time, up to a defined maximum limit.
- The destructible walls in the interior can be destroyed by shooting, they were added intentionally to increase the gaming pleasure.

## Missing or Buggy Features

- - Enemy tanks cannot harm each other, their bullets go without shooting each other.

- **Important Note:** *I assumed that all assets are in the src directly, without creating an extra directory.*

+ Applied directory type by me: **src/all assets( yellowTank1.png etc. )**

- Not like this: **src/assets(inner directory)/all assets( yellowTank1.png etc)**

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### RESTRICTIONS

- Your demo must contain sound, you can use Zoom's video recorder for this purpose, be sure about that you are sharing your whole screen, not just the application.
- Your demo video cannot be longer than five minutes, four minutes for the GUI and one minute for code, (3-4 minutes for the game and 1-2 minutes for the code is also OK but the total length of your video cannot be longer than five minutes) it cannot exceed five minutes even a little second, and your video must be in real speed, please do not speed up or down your videos.
- Everything about your demo video must be in English (you do not have to set your system language to English for sure). Your video must be fluent. It is not assumed that you are a native speaker, but it is known that your English level is at least B1+ (according to prep class), so, it is requested from you to speak at least as a B1+ speaker, little mistakes about your speech are going to be discarded but avoid mistakes as much as you can.
- Do not do these operations too fast or too slow, make them at the speed that a normal user (who is not very familiar with your system and tries to read texts) does.
- Show the things that make your system crash or things that you couldn't done in demo properly but show them after the requirements of the demo finishes, you can skip some of the requirements by saying that you did not implement it, so that your demo video becomes more fluid, less erroneous, but note that you must show your erroneous parts at the end.
- You must both narrate your GUI and code.
- It is your own responsibility to show all the functionality of your system, so if you have not mentioned about a functionality that is a request of this project or part of your extra feature, your code may be graded as low as zero for that part as there is no working example. So, please do not feel limited with given conditions, show your all work to get full credit, that means, if you have not shown a concept at your demo video, you will not have any right to say that "But it worked on my machine!", because this demo video is a chance for you to show that your code works on your machine well, but note that you can still have right to objection for the parts that are not mentioned at PDF, Piazza Notes, Q&As; say that there is a bug at a functionality and it is neither mentioned at PDF, Piazza, Q&A, nor mentioned during your implementation and you did not notice that it does not work on other machines, then for sure you can object for it by clipping a video that shows it works on your machine.

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