# Terrorist game in a battle field environment

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Goals and Objectives:

**Overview:**

For this semester's COSC 477 course project, our group would like to create a first person shooter game entitled "Terrorist game in a battle field environment". We would like the game to be a single user experience that span's over at least 2 different environments or levels.

**Objective:**

The objective of the game is to traverse through each environment or level as an assigned service member. Your task will be to hunt down and exterminate the immediate threat before your health reaches 0 in each environment. At the beginning of each level, your player will be given a full health bar of 100 points to start. But with every shot that you take, it will be a 20% decrease that will be inflicted on your player's health. You then have to find and eliminate the threat in each level to avoid being eliminated yourself. We plan on using an array of locations, in order to place the terrorist throughout the map effectively. There will be 10 enemies/ terrorist in each environment that has to be eliminated. We planned on implementing a timer for each level giving you a reasonable time to find the terrorists. Each level will also have a hidden health box that will be placed in different locations on the map. We also planned on using an array of different location points on the map, similar to the Pigeon Hunt example in the program files.

**Modeling/ Environments:**

As far as our Environment's, we planned on creating at least 1 Jungle environment using Unity and Google sketch up. We also envisioned fighting terrorism here at Bowie State University, by using a replica of the Bowie State Campus as another environment. We also have effects like fire using particle systems from the unity asset store.

**Goal:**

The overall Goal of the game is to find and eliminate the terrorist in each level in an adequate amount of time. Failure to do so, simply results in failure.

**How We Plan To Do it:**

- Some Terrorist will be taken from Google Sketchup as well as some the unity asset store.
- Our Enviroment's will be created using Unity and Google sketch up in order to properly Scale and add the collision ability to the environment.
- We also plan on using Different Textures throughout the project.
- We will also implement audio and sound effects for Gunshots and for Hit markers.
- We will give avatars the ability to perform certain animations like walking and running by using keyboard functionalities.

**Lights:**

Several lights will be utilized throughout the entire game. For example, we will use lights too show that a weapon is being fired. This will work like a muzzle flash on a gun. Lights will also illuminate the sky during day scenes in the game.

**Timers:**

We will implement timers in each level that will let the user know how much time is left to find and eliminate all the threats before you fail the mission. Each level will have this timer as well as a counter too let you know how many enemies remain

**Keyboard functionalities, Proximity Sensor, Touch Sensor, Time Sensor, etc.:**

Keyboard Functionalities will be used in many phases of the game. Avatars will be able to move throughout the map by using the arrow keys. Other Keyboard Functionalities will allow the user to better interact with the environment. Proximity Sensors will be used in order to let you know that an enemy is close to you. I will also use proximity sensors in order to let the user know that he/she is by a portion of the map that can be interacted with. Time sensors will be in each level of the game in order to keep the user on top of how much time is left in each level.

### Collision shapes, Modeling physics, Routing: Anchor node, etc.:

We will use the vizard platform in order to make sure that the collision feature is enabled. Collision being enabled will make sure that the game and its environments are as authentic as possible.

Modeling Physics will be handled both in 3DS Max and Unity. The modeling of the environment will mostly take place in Unity so we can properly scale certain portions of the Environment.

### Avatar Animations:

The avatars in each level will come with a separate list of animations that they will perform in each stage.

- **Terrorist--** Will have the ability to jog around the environment while pursuing you.

   -- They will also be able to crouch behind certain objects in the environment.
   -- Terrorist will shoot their weapons using implemented animations

- **User/Service Member--** Will have the ability to jog around the environment
   -- They will also be able to crouch behind certain objects in the environment too take cover.
   -- User will shoot their weapons using implemented animations as well.
- **Civilians—**Will Run away for safety

### Add at Least 10 Avatars:

There will be at least 10 terrorist that will try to eliminate you in each environment.

### Utilize keyboard or mouse callbacks to control the movement of the avatars

Our project will utilize the use of the keyboard in order to move and traverse the avatars throughout the environment. Mouse callbacks will also be used in the game at certain portions of the game.

### Add a sky with environmental map

Each level will include an environment with a skybox that corresponds to that environment. Environmental Maps will be included and inserted into the top left hand corner of each map. The environmental map will give a general idea of the layout of the map as well as the avatars movement throughout the map.

**Add Audio Files**

Audio files will be implemented into the game at various points. Each level will have its own environment music that will play and repeat each time that level is attempted. Sound effects will occur every time a weapon is fired. A sound affect will also occur when an enemy is hit by a bullet.