Cocaine bear game

Overall Game Idea

This game was inspired by the movie "Cocaine Bear." The game is a third-person min-game where the main objective is to collect all the bags of cocaine that are scattered around the map. The bear has a health bar and a cocaine bar. If the health bar is less than or equal to 0, the bear dies. If the cocaine bar is less than or equal to 0, the bear starts to sleep. The bear will take time to fall asleep and the speed of the bear will decrease over time until the bear is fully asleep. If the bear fully falls asleep or dies, GAME OVER. The player plays as the bear going around to collect all the bags of cocaine. However, there are enemies scattered around the map and some will be able to shoot you, which will decrease your health. The bear can regain health by eating dead humans. Humans are fearful of you so most of them will try to hide or run away from you. There is a single hand-crafted map to play on which will contain grass and trees, as well as structures dotted around the map. The location of the bags of cocaine will be predefined.

There will be several different "Areas" where there are more interesting things to look at - maybe a unique tree, or a cabin. These areas will contain a bag of cocaine each and may contain humans. Once the bear collides with a bag of cocaine, it is picked up and the cocaine meter is incremented by 50. Humans will be able to 'hide' from the bear by travelling to a 'hook' in the terrain. Once there, they will stay there until they detect the bear, in which case they will try to run away from the bear (at a slower speed than the bear). You will collect points by eating people and collecting bags of cocaine. The points will let you know your score throughout the game.

Game Level Layout

- The level layout is as follows
- The trees are not visible, but they will be present in the final version
- Highlighted areas are potential places for "Areas" which will be unique places such as a ranger cabin, or a large tree, etc…

Player (Bear)

Controls

- Controls are fairly standard, move with WASD
- The bear has a jump
- Left click will let the bear attack people -> will need to execute
- SHIFT is sprint, which then increases the rate of consumption of cocaine, causing the cocaine meter to decrease faster

Key	Action
W	Walk Forward
A	Walk Left
S	Walk Backwards
D	Walk right
Space	Jump
Mouse	Look around
Shift	Sprint
Left Click	Attack
E	Eat Dead Body

Abilities

- There are no special abilities the player has, besides a sprint which would increase consumption of cocaine, causing the cocaine meter to decrease faster
- The bear can press E to eat dead bodies, regenerating health
- If the bear is running out of cocaine, the cocaine bar will freeze at 5/100 if the bear has over 25/100 health points. Then, health will slowly drain. If the bear has less than 25/100 hp, the cocaine bar will continue to decrease and will cause the bear to die.

Animation State Machine
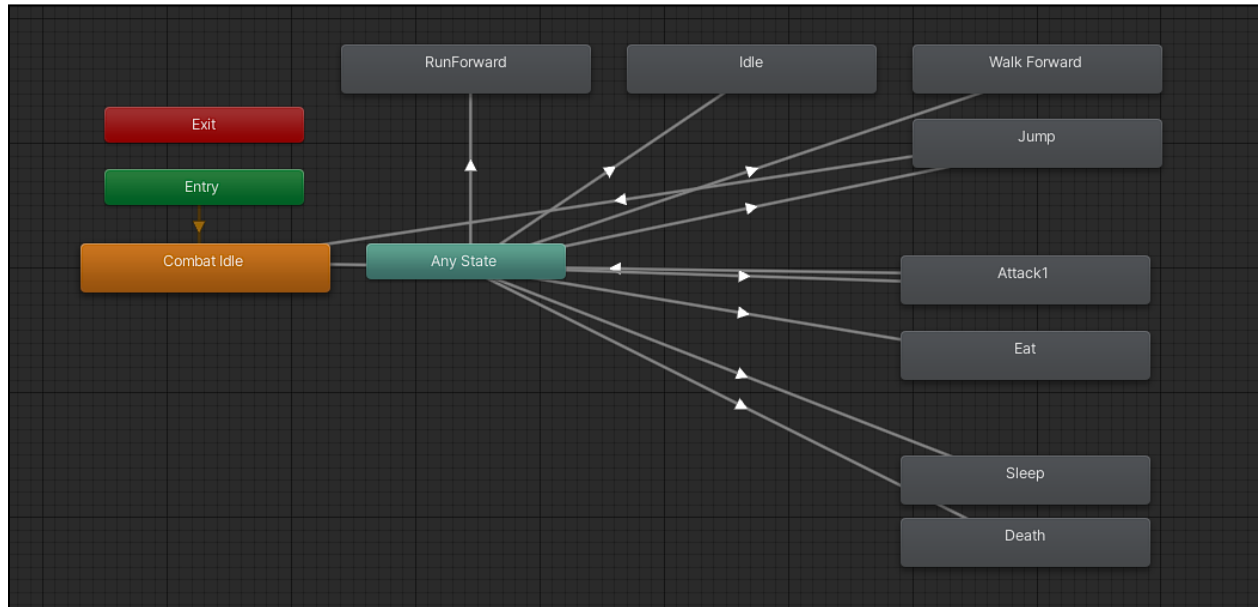
I will be using only a few animations for the bear:
Idle, Run, Eat, Sleep, Attack. These animations are triggered using SetBool for the animator. However, there are other animations listed which could be used. I will not be using the unlisted ones. The transitions are not defined since any state can transition into any state.

Enemies

Description

- Enemies, rather Humans, will come in different types: Passive and Aggressive.
- Passive:
    - Passive enemies will try to hide from the bear, otherwise they will run away.
    - Hiding involves running away from the bear and crouching.
    - While hiding, if they detect the bear, they will run in the opposite direction as the bear.
    - If the bear is no longer in range, the npc will try to position itself at its original starting location
    - The purpose of passive enemies is to serve as a way for the bear to heal.
    - If the bear is too close to the passive enemy, the enemy will be 'stunned' - they won't be able to move
- Aggressive:
    - Aggressive enemies will carry bags of cocaine as they patrol "Areas", as they are trying to recover the 'lost goods.'
    - They will throw rocks at the bear, dealing damage.

- They will try to maintain a firing distance from the bear, moving away if the bear gets closer.
- If the bear is nowhere to be found, they will go back to patrolling.
- They will not try to hide from the bear, rather they will try to protect themselves and the recovered goods from the bear using the practice of "The best defense is a good offense"

State machine for enemies

Aggressive

```
                    ┌──────────────┐
                    │    Patrol    │
                    └──────────────┘
                      │         ▲
                  Detected    !Detected
                      ▼         │
        ┌──────────────────┐           ┌─────────┐
        │  MaintainDistance │──HP <= 0─▶│  Death  │
        └──────────────────┘           └─────────┘
              ▲          │
        !InAttackRange  InAttackRange
              │          ▼
        ┌──────────────────┐
        │      Attack      │
        └──────────────────┘
```

Passive

```
┌─────────────┐                    ┌─────────────┐
│    Idle     │ ◄──AtStart──────── │ Walk to Start│
└─────────────┘                    └─────────────┘
       │                                   ▲
       │                                   │
    BearNear              !BearNear && 5 seconds passed
       │                                   │
       ▼                                   │
┌─────────────┐                    ┌─────────────┐
│  Run Away   │ ─!BearNear──────►  │    Hide     │
└─────────────┘                    └─────────────┘
       │         ▲
       │         │
       │    !BearBeryClose
  BearVeryClose  │
       │         │
       ▼         │
┌─────────────┐                    ┌─────────────┐
│  Stunned    │ ─HP <= 0─────────► │   Death     │
└─────────────┘                    └─────────────┘
```
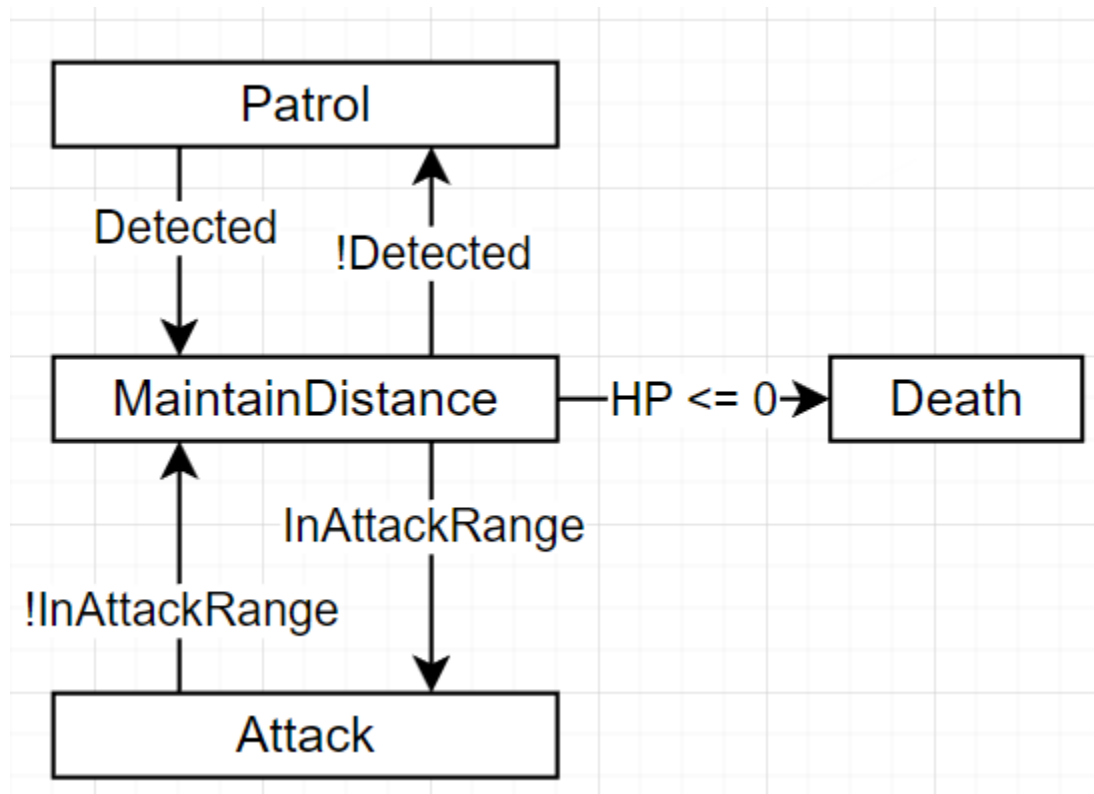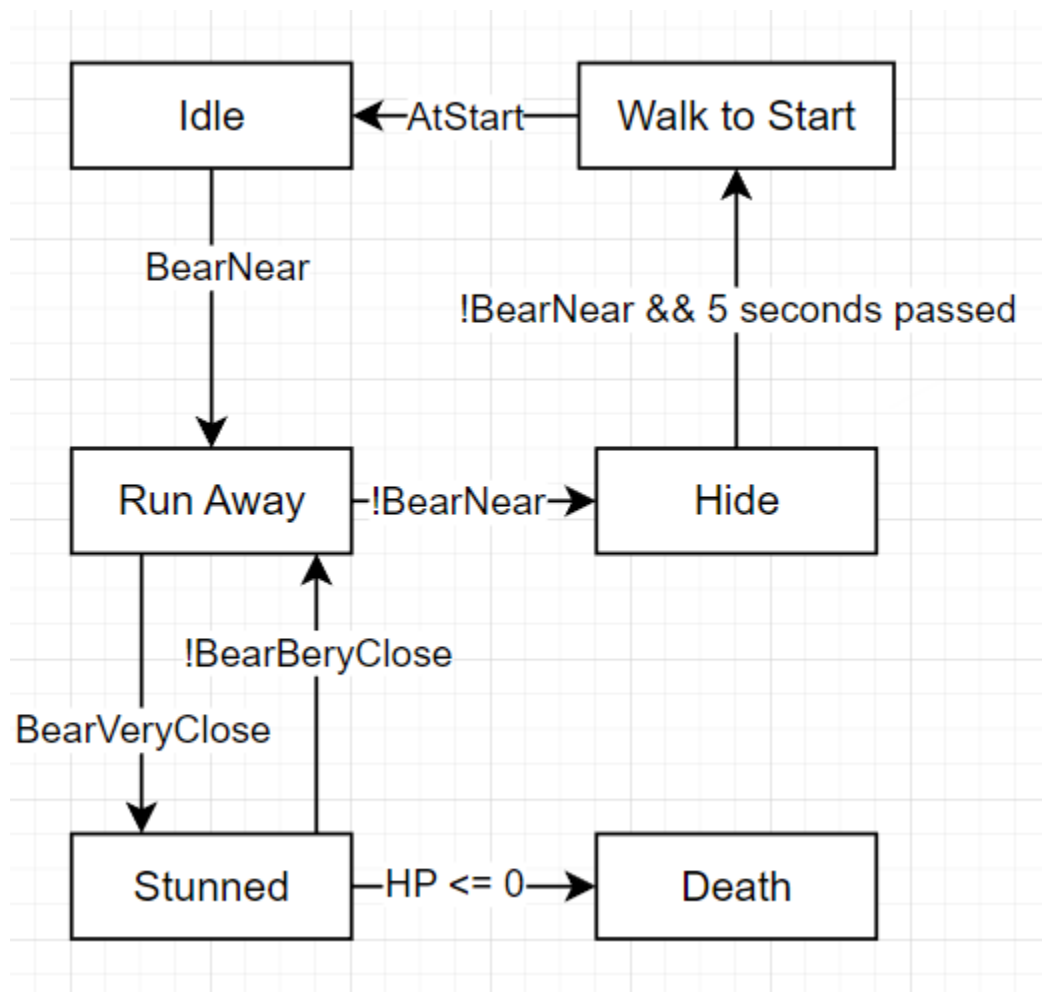
*Both enemies start in the Idle state

Animations

- Passive and Aggressive enemies are the same model, so they will have the same set of animations available to them. Here are a list of animations that will be used for the enemies:

Idle
Run
Hide
Shoot
Death
Stunned

Other Game entities

- Terrain
  - Grass
  - Trees
  - "Areas" which have other models in them though static
  - A Cave
- "Areas" are areas of terrain and misc entities (like cabins or trees) that have some interesting things in them, such as enemies or a house.
- Sound:
  - Soundtrack
  - Sounds for events, such as getting hit, or refilling cocaine

Triggers

- Bags of cocaine will refill the cocaine bar 50/100
- Bags on Aggressive NPC's backs also refill bear's cocaine bar 50/100

List of Features

Feature	Priority (MoSCoW)
Bear movement + animations	M
Bear pick up cocaine bag	M
Bear health + cocaine meters on UI	M
Bear cocaine meter decrease over time	M
Will decrease health if cocaine is low	M
Bear attack people + animations	M
Terrain - Trees	M
Terrain - Grass	M
Terrain - At least 3 "Areas"	M
Passive NPC state machine + animations	M
Aggressive NPC state machine + animations	M
Aggressive NPC shoot & do damage	M
Terrain - Hills & Mountains	S
Bear SPRINT uses more cocaine per tick	C
Bear eat dead body	C
Passive NPC hiding mechanic	C
Terrain - Caves	W
4 or more "Areas"	W
Climbing tree mechanic + NPC hiding in tree	W
Sound (soundtrack, getting hit, healing, getting more cocaine, killing an enemy, dying)	W

Project Timeline

This is a simple timeline detailing when features should be implemented by. It uses the tags of the features rather than the specific feature name to determine its due date.

March 8	March 15	March 22	March 29
All Terrain Musts All Bear Musts	Finalize Musts -> Enemies,	Shoulds & Could's	Finalize all Musts, shoulds, and clouds. Would's (time permitted)

List of Team Members

Adam Sheeres-Paulicpulle - Everything (Solo team)