

## Unity Intern Assignment Report:

We made a program in Unity that can tell if someone is squatting or standing. It looks at the person's knee angle.

- If the knee angle is small (less than 10 degrees), the person is standing.
- If the knee angle is big (more than 60 degrees), the person is squatting.

We also added buttons:

- If you press the "S" button, the person starts to squat.
- The squatting stops when the knee is bent a lot (132 degrees).
- If you press the "W" button, the person stands up again.

### Challenges faced:

#### Animation Looked Bad:

- **Problem:** At first, the squatting and standing motions looked jumpy. This was because we used two different animations that didn't match perfectly.
- **Solution:** We used one single animation for the whole squat. We made the program stop the animation when the person was fully squatted, and start it again when we press "W". This made the movement smooth.

#### Squatting Stopped Too Much:

- **Problem:** The program kept stopping the animation when the knee was bent at 132 degrees, even when we wanted it to stand up.
- **Solution:** We added a "pause" switch. When the knee is bent at 132 degrees, the program turns the "pause" switch on. The "W" button only works if the "pause" switch is on. After the animation starts again, the program turns the "pause" switch off only after the animation starts again. This way, the program only stops the squat once.