Task 1

- Since the angle changes from 0 to 360. I first converted them to be in the range -180 to 180.
- Then I used the angle made by the current position of the car with the centre of the road as reference angle to keep adjusting the angle of the car
- If the modulus of the difference between the two is greater than 3, then I keep giving them a feedback to get towards the reference angle
- If it is within this modulus, then it is allowed to move in a straight line

Task 2

- I’m creating a closest_pit function, where I calculate the closest pit w.r.t the car. Gives me the index of the pit (we have four). I’m taking the pits information from ran_cen_list list defined in the function controller_task2
- Then for dodging the closest pit, I have defined 3 cases
- First, `if x < xpit + 75 and x > xpit - 75,(where xpit, ypit are the coordinates of the centre of the pit) then again same logic as before. If angle is greater than a threshold then given a negative feedback else keep going in the current direction. The reference direction here is parallel to the x-axis since we wanna dodge the pit.`
- Second, `if y < ypit + 75 and y > ypit - 75 and y > 0 and x < xpit - 50: The logic here is same as above. The reference angle here is -90 so that it can dodge the pit and come closer to the centre of the road`
- Third, `if y < ypit + 75 and y > ypit - 75 and y < 0 and x < xpit - 50: The logic here is same as above. The reference angle here is 90 so that it can dodge the pit and come closer to the centre of the road`

Task 2

- If the car doesn’t satisfy any of the above cases then, it uses the method used in task 1 to go towards the centre of the road.