We were unable to implement the stable_baselines because the issues with Google Colab on windows and neither on Linux because of rendering issues. So, we have referenced some articles online and implemented the same codes.

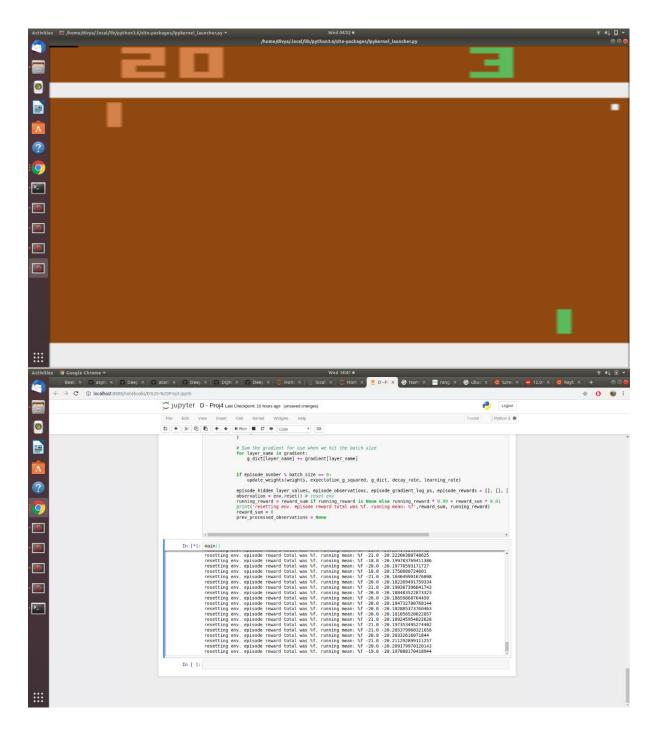
Bonus 1:

The score is improving with episodes.

```
episode: 225/1000, score: 154, e: 0.01
episode: 226/1000, score: 40, e: 0.01
episode: 227/1000, score: 158, e: 0.01
episode: 228/1000, score: 182, e: 0.01
episode: 229/1000, score: 139, e: 0.01
episode: 230/1000, score: 130, e: 0.01
episode: 231/1000, score: 129, e: 0.01
episode: 232/1000, score: 429, e: 0.01
episode: 233/1000, score: 365, e: 0.01
episode: 234/1000, score: 7, e: 0.01
episode: 235/1000, score: 151, e: 0.01
episode: 236/1000, score: 11, e: 0.01
episode: 237/1000, score: 159, e: 0.01
episode: 238/1000, score: 55, e: 0.01
episode: 239/1000, score: 15, e: 0.01
episode: 240/1000, score: 15, e: 0.01
episode: 241/1000, score: 98, e: 0.01
episode: 242/1000, score: 186, e: 0.01
episode: 243/1000, score: 93, e: 0.01
episode: 244/1000, score: 86, e: 0.01
```

Bonus 2:

Display of game and the results below.



References

https://keon.io/deep-q-learning/

 $\frac{\text{https://medium.com/@dhruvp/how-to-write-a-neural-network-to-play-pong-from-scratch-956b57d4f6e0}{\text{production}}$