

1. Non\_satur: FID 154.66, IS 7.54



Hinge: FID 119.77, IS 7.11



Hinge configuration showed significantly better results in terms of FID and slightly worse in terms of IS. Loss curve of a generator lies upside the others, but the discriminator loss situation is vice versa. In terms of visual observation, hinge also dominates non-satur configuration. Performance dominance can be caused by better gradient flow, which give better visual quality to the generated images.

2. Non-class-conditional: 119.77, IS 7.11



Class-conditional: FID 110.75, IS 11.31

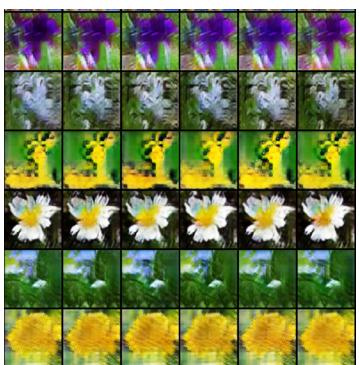


Class-conditional configuration showed better results both in terms of FID and IS. Loss curves have similar tendencies with few exceptions when for some time non-class-cond is better and for other time moments class-cond is better (right for both generator and discriminator curves). As for visual observations, class-cond configuration also dominates on non-class-cond, but also with exceptions, where artifacts significantly distort images that it is problematic to compare. Difference in performance is caused by using embeddings based on labeled data in pair with ordinary noise, it helps GAN to show better visual quality.

3. With trunc trick: FID 110.75, IS 11.31



Without trunc trick: FID 110.75, IS 11.31



Quantitatively there is no difference (FID and IS are the same), but visually with truncation trick it looks much better in terms of colors, contrast and shape; it is connected with the main principle of the trick that samples are taken from truncated normal distribution which gives better quality on val.