

## Task 10



### SIFT Result

- Number of Matches - The SIFT result shows a higher number of matches.
- Match Accuracy - SIFT typically produces more accurate and reliable matches due to its robustness to scale and rotation.
- Complexity - SIFT is computationally more expensive, which can be observed from the dense and detailed feature matches shown.

## ORB Result

- Number of Matches - The ORB result shows fewer matches compared to SIFT.
- Match Accuracy - ORB, being a more computationally efficient alternative, might sacrifice some accuracy and reliability in matching features.
- Speed - ORB is designed to be faster and less computationally intensive, which is beneficial for real-time applications, though it might result in fewer and sometimes less accurate matches.

## Observations

- Feature Distribution - Both SIFT and ORB are able to identify key features in similar regions of the image (e.g., edges and corners), but the density and number of matches differ significantly.
- Match Lines - The lines connecting matched features show that SIFT provides a more intricate and comprehensive mapping between the two images, while ORB offers a sparser mapping with fewer connections.

SIFT is more robust and accurate, making it suitable for applications requiring high precision. ORB, on the other hand, is faster and more efficient, suitable for real-time applications where computational resources are limited.