COMP37212: Coursework 2 Mark Scheme **Total (20 marks)**

1. Implement python code for Harris Corner detector	3 marks
2. Use of reflective Image padding	1 mark
3. Calculate the I_{x_p} and I_{y_p} partial image derivatives (with respect to x and y) at point p using the sobel operator, and also the corresponding $I_{x_p}^2, I_{y_p}^2, I_{x_p}I_{y_p}$ values.	2 marks
4. Find corner response R for every image pixel (using a Gaussian window)	2 marks
5. Find strong *interest points* via thresholding and local maxima operations. Plot graph of interest points (keypoints) numbers vs threshold values.	2 marks
6. Calculate ORB Local features (using ORB descriptor) for your detected interest points. Compare with build-in ORB features.	2 marks
7. Implement sum of squared distances to measure Local Feature similarity and ratio test to discard points that will give ambiguous matches.	3 marks
8. Comments and observations	2 marks
9. Report demonstrates excellent understanding	3 marks