Firstly, types of support reactions were determined. The system has 1 Roller, 1 Pinned support. Secondly, type of load is determined which is 1 singular load that is 20 kN. System analyses is done.

Now, Free Body Diagram is drawn, and taking moment at both ends of beam. Ax, Ay, and By are calculated. Shear Force diagram and Moment diagram plotted.

All calculations showed and visualized in Python using matplotlib library.