Mini report #1 (Advanced Automation) 2020.11.5

Student #: _____   Name: _____

[**NOTICE**]

- write by hand

- due date: 2020/11/11 17:00; place of submission: room 405(1   )

- check if your answer is correct before submission by using MATLAB

- don't answer in approximated values (write $\sqrt{2}$ instead of 1.4142 , for example)

Let M be a matrix given as:

$$M = \begin{bmatrix} \sqrt{2} & -\frac{j}{\sqrt{2}} \\ \sqrt{2} & \frac{j}{\sqrt{2}} \end{bmatrix}.$$

Answer the followings:

(1) $\bar{M}$

(2) M^*

(3) M^*M

(4) $\lambda_i(M^*M)$

(5) $\sigma_i(M)$

(6) $\bar{\sigma}(M)$