

**Universiti Teknologi MARA**

**MODELLING CORONAVIRUS DISEASE (COVID-19)  
DAILY CASES IN MALAYSIA USING SUSCEPTIBLE  
INFECTED RECOVERED MODEL**

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Sciences**

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## **STUDENT'S DECLARATION**

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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## **ABSTRACT**

In this work, the Susceptible-Infected-Removed (SIR) epidemiological model of the COVID-19 pandemic was introduced in the Malaysia Movement Control Order (MCO). The proposed model is intended to provide accurate prescient data to the chiefs of the evaluation of general welfare and social estimates identified with COVID-19 pestilence. The SIR model was adapted to the information by limiting the weighted loss function; the sum of the residues (RSS) of infected, eliminated and total cases. The SIR model MCO shows a pinnacle of disease on 10 April 2020, in 100 dynamic cases by early July 2020, in 10 dynamic cases by end-August 2020, and almost zero daily new cases by end week of July 2020, with a total of 6562 contaminated cases. Results suggest that the present MCO has decreased overall the quantity of the powerless population and the total number of contaminated cases. The technique used in this investigation to fit the SIR model was discovered to be accurate in mirroring the information observed in the first place.

**Keywords: Covid-19, SIR Model, Epidemic Trend, Malaysia, Movement Control Order**

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