

DEVELOPMENT OF AN
INTERRUPT DEMONSTRATION UNIT

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SUMMARY

The primary purpose of this project is to demonstrate the powerful interrupt structure offered by the 8085 microprocessor. This is achieved with the design and construction of an Interrupts Demonstration Unit.

First the interrupts are examined, by considering a microprocessor system as an example, and then the interrupt structure of the 8085 microprocessor is introduced. All the internal and external operations concerning the interrupts and the ways that they can be controlled are investigated and explained throughout.

Then according to the requirements of this project the block diagram, of the unit to be constructed, is given with a brief explanation on each section. Following this, the operation of the unit is described.

The hardware design then follows, which is fully explained, accompanied with the relevant schematic circuits. The unit incorporates an 8085 microprocessor circuit and the appropriate interface from where the different interrupts are triggered. A keyboard is also provided which is used for selecting different functions of the program or to enable or disable the interrupts. For interfacing with the VDU, a circuit was constructed which performs a voltage level translation. On the VDU the messages for each interrupt activated are displayed.

After that the software developed for this purpose is described in detail. It was designed so as to implement all the features of the interrupts offered by the 8085 microprocessor.

The major conclusion that arises is that the interrupts give more flexibility in designing a system and also they save a considerable amount of time which is the most important concept in any microprocessor application.

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