# Experiment 1: Error Detection using Parity

**Aim:** To apply Parity check rules for error detection

**Objective:** After carrying out this experiment, students will be able to:

* Apply 1D and 2D parity rules for error detection
* Analyze the difference between 1D and 2D parity and their limitations

**Problem statement:** You are required to write separate programs to demonstrate the use of 1D and 2D parity. Take the input bit streams (max five) of 7 bit each from the user. Your programs should calculate the parity and display the input and output bit streams.

**Analysis:** While analyzing your program, you are required to address the following points:

* Why can this method not be used to correct errors?
* How are 1D and 2D parity different?
* What are the limitations of this method of error detection?

**MARKS DISTRIBUTION**

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| --- | --- | --- |
| **Component** | **Maximum Marks** | **Marks Obtained** |
| Preparation of Document | 7 |  |
| Results | 7 |  |
| Viva | 6 |  |
| **Total** | **20** |  |

Submitted by:

Register No:

1. Algorithm/Flowchart
2. Program
3. Results
4. Analysis and Discussions
5. Conclusions
6. Comments
   1. Limitations of the experiment
   2. Limitations of the results obtained
   3. Learning
   4. Recommendations