NORMALISATION

- IT IS THE PROCESS OF ORGRANISING THE ATTRUBUTES AND TABLES OF A DATABASE TO MINIMIZE REDUNDANCY AND DEPENDENCY.

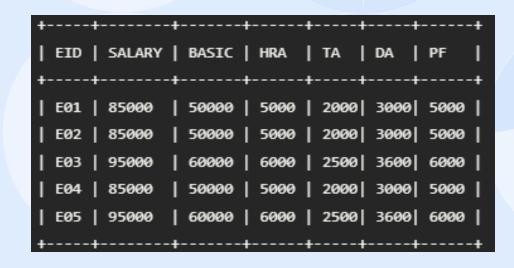- MAIN GOAL IS TO STRUCTURE THE DATABASE AND MAKE IT FLEXIBLE,SCALABLE AND FREE FROM ANY ANOMALY.

1NF

- EMPLOYEE

  (EID,NAME,AGE,SALARY,BASIC,HRA,TA,DA,PF,DESIGNATION,

  DEPARTMENT,HOD)

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+-----+------------+-----+---------+--------+------+-----+-----+------+-------------+------------+--------------+
| EID | NAME       | AGE | SALARY  | BASIC  | HRA  | TA  | DA  | PF   | DESIGNATION | DEPARTMENT | HOD          |
+-----+------------+-----+---------+--------+------+-----+-----+------+-------------+------------+--------------+
| E01 | John Doe   | 30  | 85000   | 50000  | 5000 | 2000| 3000| 5000 | Developer   | IT         | Sarah Smith  |
| E02 | Jane Smith | 35  | 85000   | 50000  | 5000 | 2000| 3000| 5000 | Developer   | IT         | Sarah Smith  |
| E03 | Mike Ross  | 28  | 95000   | 60000  | 6000 | 2500| 3600| 6000 | Manager     | HR         | Tom Johnson  |
| E04 | Lisa Chen  | 32  | 85000   | 50000  | 5000 | 2000| 3000| 5000 | Analyst     | IT         | Sarah Smith  |
| E05 | Bob Wilson | 40  | 95000   | 60000  | 6000 | 2500| 3600| 6000 | Manager     | Finance    | Peter Brown  |
+-----+------------+-----+---------+--------+------+-----+-----+------+-------------+------------+--------------+
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2NF

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+-----+----------+-----+-------------+------------+
| EID | NAME     | AGE | DESIGNATION | DEPARTMENT |
+-----+----------+-----+-------------+------------+
| E01 | John Doe | 30  | Developer   | IT         |
| E02 | Jane Smith| 35 | Developer   | IT         |
| E03 | Mike Ross | 28 | Manager     | HR         |
| E04 | Lisa Chen | 32 | Analyst     | IT         |
| E05 | Bob Wilson| 40 | Manager     | Finance    |
+-----+----------+-----+-------------+------------+
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+-----+--------+-------+------+-----+-----+------+
| EID | SALARY | BASIC | HRA  | TA  | DA  | PF   |
+-----+--------+-------+------+-----+-----+------+
| E01 | 85000  | 50000 | 5000 | 2000| 3000| 5000 |
| E02 | 85000  | 50000 | 5000 | 2000| 3000| 5000 |
| E03 | 95000  | 60000 | 6000 | 2500| 3600| 6000 |
| E04 | 85000  | 50000 | 5000 | 2000| 3000| 5000 |
| E05 | 95000  | 60000 | 6000 | 2500| 3600| 6000 |
+-----+--------+-------+------+-----+-----+------+
```

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+-----------+--------------+
| DEPARTMENT | HOD         |
+-----------+--------------+
| IT        | Sarah Smith  |
| HR        | Tom Johnson  |
| Finance   | Peter Brown  |
+-----------+--------------+
```

3NF

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+-----+-----------+-----+-------------+------------+
| EID | NAME      | AGE | DESIGNATION | DEPARTMENT |
+-----+-----------+-----+-------------+------------+
| E01 | John Doe  | 30  | Developer   | IT         |
| E02 | Jane Smith| 35  | Developer   | IT         |
| E03 | Mike Ross | 28  | Manager     | HR         |
| E04 | Lisa Chen | 32  | Analyst     | IT         |
| E05 | Bob Wilson| 40  | Manager     | Finance    |
+-----+-----------+-----+-------------+------------+
```

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+-----+--------+-------+------+
| EID | SALARY | BASIC | TA   |
+-----+--------+-------+------+
| E01 | 85000  | 50000 | 2000 |
| E02 | 85000  | 50000 | 2000 |
| E03 | 95000  | 60000 | 2500 |
| E04 | 85000  | 50000 | 2000 |
| E05 | 95000  | 60000 | 2500 |
+-----+--------+-------+------+
```

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+------------+-------------+
| DEPARTMENT | HOD         |
+------------+-------------+
| IT         | Sarah Smith |
| HR         | Tom Johnson |
| Finance    | Peter Brown |
+------------+-------------+
```

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+-------+------+------+------+
| BASIC | HRA  | DA   | PF   |
+-------+------+------+------+
| 50000 | 5000 | 3000 | 5000 |
| 60000 | 6000 | 3600 | 6000 |
+-------+------+------+------+
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ER DIAGRAM

THANK YOU

YASH SACHDEVA

WCS144