**Assignment-3**

**Convert given input expression into all possible equivalent expression using equivalence rules**

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| **Relational Algebra Symbol** | **Symbol Used** |
| **σ** (Select) | Sigma |
| Π (Project) | Project |
| **^** (And operator) | ^ |
| X (Cartesian product) | \* |
| **⋈ (**Join **)** | Join |
| ∪ (Union) | Union |
| **∩ (**Intersection **)** | Intersect |
| **-** (Set Difference) | - |

**Table for symbol used in the code**

* Input Expression is in the file named as ‘Input-File.txt’
* Output will be stored in file named ‘Output-File.txt’
* There should be a single blank space between each word of the input expression

(But for **conditions,** complete condition should be written without space and **list of attributes** should also be written without space i.e. in case of Project)

Ex.1 Sigma a>100 ( Student )

(Here condition a>100 should be written without space)

Ex.2 Project age,marks ( Student )

(Here age,marks should be written without space)

* Each single expression should be enclosed within ‘[‘and ‘]’ (with a single space after ‘[’ and before ‘]’)
* (see ‘Input-File.txt’ for the example)

**Note:** Some more examples are there in **“OtherExamples”** folder

To use these example, copy content of inp file(inp1.txt inp2.txt inp3.txt) and paste it in Input-File.txt to run the code for the following inp file.