**In Class Relational Algebra Operations Results**

**Table R**

COL\_A COL\_B

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| --- | --- |
| A | 1 |
| B | 2 |
| D | 3 |
| F | 4 |
| E | 5 |

**Table S**

COL\_A COL\_B

|  |  |
| --- | --- |
| A | 1 |
| C | 2 |
| D | 3 |
| E | 4 |

**UNION**

R UNION S

COL\_A COL\_B

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**INTERSECTION**

R INTERSECTION S

COL\_A COL\_B

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**DIFFERENCE: R – S**

COL\_A COL\_B

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**DIFFERENCE: S -R**

COL\_A COL\_B

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**CARTESIAN PRODUCT**

**R CROSS S**

**R.COL\_A R.COL\_B S.COL\_A S.COL\_B**

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**JOIN**

**R.COL\_A = S.COL\_A**

**R.COL\_A R.COL\_B S.COL\_A S.COL\_B**

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**JOIN**

**R.COL\_B = S.COL\_B**

**R.COL\_A R.COL\_B S.COL\_A S.COL\_B**

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**OUTER JOINS**

**LEFT OUTER JOIN**

**R.COL\_A = S.COL\_A**

**R.COL\_A R.COL\_B S.COL\_A S.COL\_B**

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**LEFT OUTER JOIN**

**R.COL\_B = S.COL\_B**

**R.COL\_A R.COL\_B S.COL\_A S.COL\_B**

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**FULL OUTER JOIN**

**R.COL\_B = S.COL\_B**

**R.COL\_A R.COL\_B S.COL\_A S.COL\_B**

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