Item Based CF

```
>=0 and <1: 37767

>=1 and <2: 5064

>=2 and <3: 1277

>=3 and <4: 738

>=4: 390

18/10/17 22:28:13 WARN TaskSetManage

RMSE = 0.9567979353132946

Time 265.709200032
```

Model Based CF

```
18/10/17 23:19:30 WARN LAPACK: Failed to load implementation
>=0 and <1: 28502
>=1 and <2: 13411
>=2 and <3: 2237
>=3 and <4: 266
>=4: 44
RMSE 1.078569761864661
Time: 15
Process finished with exit code 0
```

Environment Version

Spark: 2.3.1 Scala: 2.11.0

Command to execute solution:

```
spark-submit --class Ashir_Alam_ItemBasedCF Ashir_Alam_hw2.jar <input_path> <output_path>
spark-submit --class Ashir_Alam_ModelBasedCF Ashir_Alam_hw2.jar <input_path> <output_path>
```