1) Year 1990 with Combiner. Time taken: 1m23s

2017.02.12 00:42:15 UTC	2017.02.12 00:42:29 UTC	2017.02.12 00:43:52 UTC	job_1486858378721_0001	Max temperature	vagrant	default	SUCCEEDED	8	8	1	1

Year 1990 without Combiner. Time taken: 1m25s

2017.02.12 01:52:31 UTC	2017.02.12 01:52:38 UTC	2017.02.12 01:54:03 UTC	job_1486858378721_0005	Max temperature	vagrant	default	SUCCEEDED	8	8	1	1

2) Year 1991 without Combiner. Time taken: 5m11s

2017.02.12 01:12:03 UTC	2017.02.12 01:12:11 UTC	2017.02.12 01:17:22 UTC	job_1486858378721_0002	Max temperature	vagrant	default	SUCCEEDED	28	28	1	1

3) Year 1992 Without combiner. Time Taken: 7m25s

2017.02.12 01:29:38 UTC	2017.02.12 01:30:33 UTC	2017.02.12 01:37:58 UTC	job_1486858378721_0003	Max temperature	vagrant	default	SUCCEEDED	52	52	1	1

4) Year 1993 without combiner. Time taken: 2m5s

2017.02.12 01:56:30 UTC	2017.02.12 01:56:41 UTC	2017.02.12 01:58:46 UTC	job_1486858378721_0006	Max temperature	vagrant	default	SUCCEEDED	27	27	1	1

I first ran all 4 files with MaxTemperature.java. A few times I got the failed result but later all 4 years were successful.

Later when I tried with MaxTemperatureWithCombiner.java, only the year 1990 was working. Because of space issue, other years could not be executed with this code.

Comparison of the time taken for each year to get the output using MaxTemperature.java class:

Time Taken(sec)

Year	
1990	1991	1992	1993
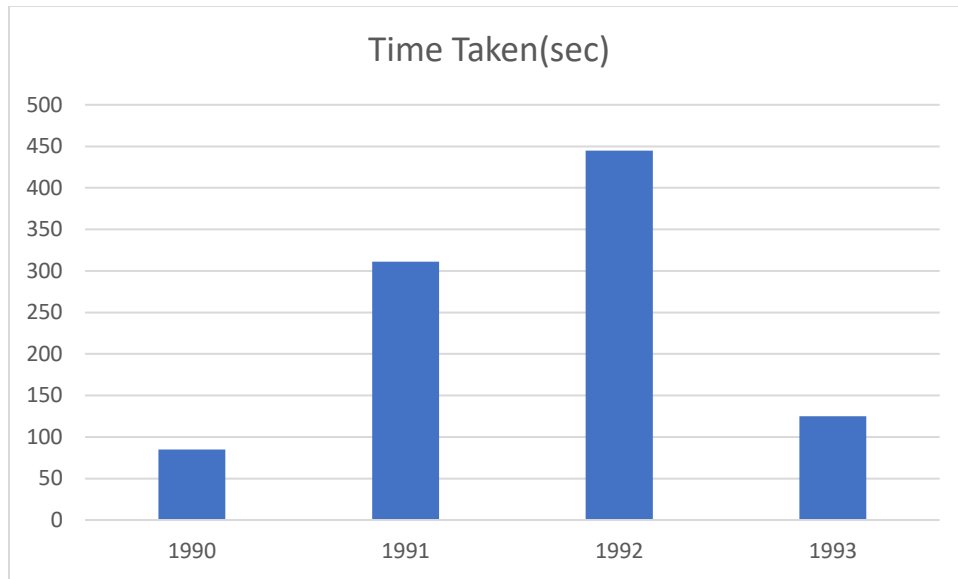
The combiner class acts like a bridge between the Mapper and Reducer class. It does clustering of similar key-value pairs obtained from the mapper class. It sends the similar values together to the reducer so that reducer takes less time to execute.