ASSIGNMENT-3

The readings for Direct mapped cache are as follows:

File name	Hit rate (%)	Miss rate (%)
gcc	19.16	80.83
gzip	8.42	91.57
m.c.f	0.43	99.56
swim	54.01	45.98
twolf	30.86	69.13

The reading for set associative cache are as follows:

File name	Hit rate (%)	Miss rate (%)
gcc	93.56	6.43
gzip	66.79	33.28
m.c.f	1.05	98.94
swim	92.5	7.49
twolf	98.7	1.22

Observations:

From the data we can see that for direct mapped cache, more misses are happening. Which might be resulting from temporal locality.
For set associative cache we can see that, it has far more hit ratio.
As set associative caches are more efficient to store data because there are no index bits unlike in Direct mapped cache. So set associative caches always have more hit ratio than direct mapped cache. This fact is also verifiable from the above data.