First to run is the Main class:

# You are asked to choose the mapping function.

# The parameter is passed through an object of the class

" Cache-Builder ".

# Depending on the choice, a function is called to create the cache.

# the constructor of chosen type class takes parameters of the

Main memory and cache:

- RAM size - Cache size - Block size

- Replacement Algorithm

- Write Hit / Miss policy

# Then the code flow returns to the related function in class

Cache-Builder to get a sequence of Read/Write instruction

# for each memory reference the information about it is shown

\_ Block Number

\_ Tag

\_ Cache (Hit/Miss)

\_ Allocate Line (Y/N)

\_ Write Back (Y/N)

\_ Input Order to Cache " for FIFO replacement "

\_ Number of Access in cache " for LFU replacement"

More about Program structure:

**Direct Mapped class:**

# Contains an Array of integers to hold the Tag.

# Constructor method

# Read method

# Write method

**Associative Mapped class:**

# Contains Array of Objects " Line class ".

# Constructor method

# Read method

# Write method

**Set Mapped class:**

# Contains Array of Objects " Set class ".

# Each Set is an Array of Objects " Line class".

# Constructor method

# Read method

# Write method

and there is many functions related to each class to make calculations for different parameters needed to be shown.

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