

# MongoDB Cache Installations Instructions

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## Install

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Install .NET SDK 5 if you don't have already. The Makefile included with this program can do it for you.

```
make install
```

## Verify

---

Verify that you have dotnet installed properly.

```
make verify
```

The output should be similar to the below result :

```
dotnet --info
.NET SDK (reflecting any global.json):
  Version:   5.0.404
  Commit:    72c68b830a

Runtime Environment:
  OS Name:     Mac OS X
  OS Version:  12.1
  OS Platform: Darwin
  RID:         osx-x64
  Base Path:   /usr/local/share/dotnet/sdk/5.0.404/

Host (useful for support):
  Version: 6.0.1
  Commit:  3a25a7f1cc

.NET SDKs installed:
  5.0.404 [/usr/local/share/dotnet/sdk]

.NET runtimes installed:
  Microsoft.AspNetCore.App 5.0.13 [/usr/local/share/dotnet/shared/Microsoft.AspNetCore.App]
  Microsoft.NETCore.App 5.0.13 [/usr/local/share/dotnet/shared/Microsoft.NETCore.App]
  Microsoft.NETCore.App 6.0.1 [/usr/local/share/dotnet/shared/Microsoft.NETCore.App]

To install additional .NET runtimes or SDKs:
  https://aka.ms/dotnet-download
```

## Build

---

Compile the program.

```
make build
```

The output should be similar to the below result :

```
dotnet build
Microsoft (R) Build Engine version 16.11.2+f32259642 for .NET
Copyright (C) Microsoft Corporation. All rights reserved.

Determining projects to restore...
All projects are up-to-date for restore.
MongoDBQueryCache -> /Users/saryakumar/github/my-programs/cacheapp/MongoDBQueryCache/bin/Debug/net5.0/MongoDBQueryCache.dll
TestProject1 -> /Users/saryakumar/github/my-programs/cacheapp/TestProject1/bin/Debug/net5.0/TestProject1.dll
MongoDBCacheApp -> /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/MongoDBCacheApp.dll

Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:01.32
```

## Run

Run the program.

```
make run
```

## Output

Once you use the `make run` command then the results should be displayed as follows:

```
dotnet /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/MongoDBCacheApp.dll /Users/saryakumar/github/my-pr
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query1.json
Query cache hit: False
Query returned 794 items.
Time elapsed: 2317 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query2.json
Query cache hit: True query id is 1
Query returned 606 items.
Time elapsed: 81 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query3.json
Query cache hit: False
Query returned 1983 items.
Time elapsed: 708 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query4.json
Query cache hit: True query id is 1
Query returned 50 items.
Time elapsed: 14 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query5.json
Query cache hit: True query id is 1
Query returned 50 items.
Time elapsed: 14 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query7.json
Query cache hit: False
Query returned 608 items.
Time elapsed: 479 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query8.json
Query cache hit: True query id is 3
Query returned 19 items.
Time elapsed: 22 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query9.json
```

```
Query cache hit: False
Query 1 evicted from cache.
Evicted all the 794 results belonging to query 1.
Query returned 0 items.
Time elapsed: 173 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query10.json
Query cache hit: False
Query 2 evicted from cache.
Evicted all the 1983 results belonging to query 2.
1114 results evicted from cache.
Query returned 5506 items.
Time elapsed: 1788 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query1.json
Query cache hit: True query id is 3
Query returned 0 items.
Time elapsed: 10 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query4.json
Query cache hit: True query id is 3
Query returned 0 items.
Time elapsed: 8 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query8.json
Query cache hit: True query id is 3
Query returned 0 items.
Time elapsed: 10 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query3.json
Query cache hit: False
Query 3 evicted from cache.
Evicted all the 0 results belonging to query 3.
1983 results evicted from cache.
Query returned 1983 items.
Time elapsed: 1119 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query9.json
Query cache hit: True query id is 4
Query returned 0 items.
Time elapsed: 11 ms.
=====
Reading the input queries file /Users/saryakumar/github/my-programs/cacheapp/ConsoleApp1/bin/Debug/net5.0/queries/query10.json
Query cache hit: True query id is 5
Query returned 0 items.
Time elapsed: 24 ms.
=====
```

