

C++ Programming AskMe Project

Mostafa S. Ibrahim

Teaching, Training and Coaching since more than a decade!

Artificial Intelligence & Computer Vision Researcher

PhD from Simon Fraser University - Canada

Bachelor / Msc from Cairo University - Egypt

Ex-(Software Engineer / ICPC World Finalist)



AskMe - Big Picture

- People ask questions and others answers them
- This is **files-based** system
 - Every time the user run it, you see the previous state (users/questions/answers)
 - Multiple users can use it in same time (**parallel**)
 - You send question. I see it
 - I answer the question or remove it, you see this update
- Login/Sign up/Sign Out
 - Any system allow a user to sign up (name, email, password, username, ~~password~~)
 - Also: As a user do you allow anonymous questions?
- User operations
 - Print questions: From you, To you, Feed Questions
 - Ask and answer questions. System support threads
 - Delete a question (which might be a thread)

AskMe: Design

- Every user has a system generated ID
 - Same for every question
 - We can view these IDs on the site (not realistic)
- A thread question
 - If a question is answered. Others can ask questions in the original question thread
 - E.g. original question is parent for all of them
 - If this parent question is removed, the whole thread is removed
- Correctness
 - You can't do something wrong!
 - E.g. you can't remove a question asked to someone else!
 - You can only see/edit the details of your question

AskMe: Login

Menu:

- 1: Login
- 2: Sign Up

Enter number in range 1 - 2: 1

Enter user name & password: mostafa 111

Menu:

- 1: Print Questions To Me
- 2: Print Questions From Me
- 3: Answer Question
- 4: Delete Question
- 5: Ask Question
- 6: List System Users
- 7: Feed
- 8: Logout

Enter number in range 1 - 8: 1523

ERROR: invalid number...Try again

Enter number in range 1 - 8: |

- My system already has 3 users and several questions
- Let's login and see menu

AskMe: Print Questions to me

Print User ID and name beside the question,
to know who ask the question.

Enter number in range 1 - 8: 1

Question Id (101) from user id(11) Question: Should I learn C++ first or Java
Answer: I think C++ is a better Start

Thread: Question Id (203) from user id(11) Question: Why do you think so!
Thread: Answer: Just Google. There is an answer on Quora.

Thread: Question Id (205) from user id(45) Question: What about python?

Thread: Question Id (300) Question: Is it ok to learn Java for OOP?
Thread: Answer: Good choice

Thread: Question Id (302) Question: Why so late in reply?

Question Id (301) from user id(11) Question: Free to meet?

AskMe: Print Questions from me

the output shape has been enhanced.

```
Enter number in range 1 - 8: 2
```

```
Question Id (211) to user id(11)
```

```
Question: It was nice to chat to you
```

```
Answer: For my pleasure Dr Mostafa
```

```
Question Id (212) !AQ to user id(45)
```

```
Question: Please search archive before asking NOT Answered YET
```

- !AQ = ! Anonymous question
 - It means the other guy can see my ID

AskMe: Answer and Delete

```
Enter number in range 1 - 8: 3
Enter Question id or -1 to cancel: 101
Question Id (101) from user id(11)      Question: Should I learn C++ first or Java
      Answer: I think C++ is a better Start
```

```
Warning: Already answered. Answer will be updated
Enter answer: C++ is really a good choice
```

- Answered question (101)
 - We overwrote answer
- Also we deleted question (300)

```
Enter number in range 1 - 8: 4
Enter Question id or -1 to cancel: 300
```

AskMe: Updated system

Enter number in range 1 - 8: 1

Question Id (101) from user id(11) Question: Should I learn C++ first or Java

Answer: C++ is really a good choice

Thread: Question Id (203) from user id(11) Question: Why do you think so!

Thread: Answer: Just Google. There is an answer on Quora.

Thread: Question Id (205) from user id(45) Question: What about python?

Thread: Question Id (302) Question: Why so late in reply?

Question Id (301) from user id(11) Question: Free to meet?

AskMe: Listing system users

```
Enter number in range 1 - 8: 6
ID: 45      Name: ali_wael
ID: 13      Name: mostafa_saad_ibrahim
ID: 11      Name: noha_salah
..
```

AskMe: Ask question, not a thread

```
Enter number in range 1 - 8: 5
Enter User id or -1 to cancel: 11
Note: Anonymous questions are not allowed for this user
For thread question: Enter Question id or -1 for new question: -1
Enter question text: Noha, How old are you?
```

AskMe: Listing the users feed

```
Enter number in range 1 - 8: 7
Question Id (101) from user id(11) To user id(13)      Question: Should I learn C++ first or Java
    Answer: C++ is really a good choice
Thread Parent Question ID (101) Question Id (203) from user id(11) To user id(13)      Question: Why do you think so!
    Answer: Just Google. There is an answer on Quora.
Question Id (211) To user id(11)      Question: It was nice to chat to you
    Answer: For my pleasure Dr Mostafa
```

AskMe: Ask question, in a thread

```
Enter number in range 1 - 8: 5
Enter User id or -1 to cancel: 11
Note: Anonymous questions are not allowed for this user
For thread question: Enter Question id or -1 for new question: 211|
Enter question text: Please don't forget emailing the slides
```

AskMe: Let's login by Noha user

Enter number in range 1 - 8: 1

Question Id (211) Question: It was nice to chat to you

Answer: For my pleasure Dr Mostafa

Thread: Question Id (304) from user id(13)

Question: Please don't forget emailing the slides

Question Id (303) from user id(13)

Question: Noha How old are you?

Enter number in range 1 - 8: 2

Question Id (101) !AQ to user id(13)

Question: Should I learn C++ first or Java

Answer: C++ is really a good choice

Question Id (203) !AQ to user id(13)

Question: Why do you think so! Answer: Just Google. There is an answer on Quora.

Question Id (302) to user id(13)

Question: Why so late in reply?

NOT Answered YET

Question Id (301) !AQ to user id(13)

Question: Free to meet?

NOT Answered YET

AskMe: Sign up

Menu:

- 1: Login
- 2: Sign Up

Enter number in range 1 - 2: 2

Enter user name. (No spaces): morad

Enter password: 444

Enter name: morad_zeny

Enter email: morad@gmail.c

Allow anonymous questions?: (0 or 1)1

Menu:

- 1: Print Questions To Me
- 2: Print Questions From Me
- 3: Answer Question
- 4: Delete Question
- 5: Ask Question
- 6: List System Users
- 7: Feed
- 8: Logout

Enter number in range 1 - 8:

AskMe

- In next video: Demo for parallel sessions

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”