

# 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 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



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



Enter number in range 1 - 8: 2

Question Id (211) to user id(11)

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

Question: It was nice to chat to you

Answer: For my pleasure Dr Mostafa

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?



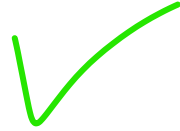


# AskMe: Listing system users

```
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

update

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.”*