

## DATA ACCESS METHOD USAGE FOR MATHTG

This is a top-level view of how to use the access methods for the test data for MathTG test generator.

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```
Question getSpecificQuestion(File database, int ID)
    throws Exception if database does not exist
    throws Exception if ID does not exist within inFile

    returns question from database with given ID
```

---

```
Question getRandomQuestion(File database, String subject, int difficulty)
    throws Exception if database does not exist
    throws Exception if subject does not exist
    within database

    returns a randomly selected Question object from database
    within given subject
```

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```
void addQuestion(File database, String subject, String section,
    String topic, String difficulty, String htmlQ,
    String htmlChoices, String htmlAnswer,
    String latexInstructions, String latexQuestion,
    String jeopardyQuestion, String jeopardyAnswer,
    String instructions)

    adds a question to the xml file with the supplied parameters,
    generating a valid ID for the question
    creates database file if non-existent
```

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```
void removeQuestion(File database, int ID)
    throws Exception if database does not exist
    throws Exception if ID does not exist within database

    deletes the question associated with the given ID
```

---

```
void editQuestion(File database, int ID,
    String fieldName, String newValue)
    throws Exception if ID does not exist within database
    throws Exception if fieldName does not exist

    finds question with given ID, and changes the value in field
    fieldName(ex: "subject", "answer", "latex_instructions")
    to newValue
*note: can be used in tandem with getQuestion for GUI implementation
```

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```
Question[] browse(File database, String[] subject)
    throws Exception if database does not exist
    throws Exception if a subject does not exist

    returns a set of questions matching the given subjects,
    can take multiple subject inputs at once
```