

# What are my options for building a database application at MIT?

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There are number of options available for building a database application for your department, lab, center, course, or student activity.

IS&T currently provides two departmental database platforms to the MIT Community: [FileMaker](#) and [Quick Base](#).

### Scope of this page

The grid below is limited to three applications available through IS&T with broad use at MIT: FileMaker; Quick Base and DrupalCloud. There are many other CRM/database applications, such as SalesForce, FluidReview and TerraDotta, currently in use on campus as well. Campus-based user groups may be useful resources to consider when choosing one product over another. In addition, the MIT Procurement Office may be able to provide some guidance when choosing an application and partnering with vendors.

FileMaker and Quick Base are both easy-to-use collaborative database applications. There is some overlap in feature sets between the two, and each has its own strengths and weaknesses. So, instead of listing all their features, this page focuses on key differences and considerations that may be relevant to users at MIT. Your specific use case will guide your decision-making process.

MIT's [Drupal Cloud](#), while not a database platform, is also included here where web-enabled content and some data capture through web forms may be required. Drupal Cloud should only be considered where limited data processing and no programmed workflow is required.

### Overview Comparison

The following table provides a side-by-side comparison of the various options for building a database application at MIT, and their support for some common features. Please see the footnotes for further details.

| Service                                                                          | FileMaker                                                                                                                                                              | Quick Base                                                                                                                              | Drupal Cloud                                                                                                                 |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Software cost<br>(For MIT users)                                                 | Free <sup>1</sup>                                                                                                                                                      | Free <sup>2</sup>                                                                                                                       | Free                                                                                                                         |
| Hosting cost                                                                     | Depends <sup>3</sup>                                                                                                                                                   | Free                                                                                                                                    | Free                                                                                                                         |
| Minimum skills required<br>for using templates<br>provided by the<br>application | Minimal                                                                                                                                                                | Minimal                                                                                                                                 | Minimal                                                                                                                      |
| Minimum skills required<br>for building simpler<br>solutions                     | Power user                                                                                                                                                             | Power user                                                                                                                              | Power user <sup>4</sup>                                                                                                      |
| Requirements for<br>building complex<br>solutions                                | Database development<br>experience<br>(or a hired developer)                                                                                                           | Database development experience<br>(or a hired developer)                                                                               | Advanced configuration not available                                                                                         |
| Flexibility/customizability<br>of user interface                                 | Highly customizable, with<br>native ability to create<br>complicated functions and<br>workflows<br>(Complex functionality<br>requires FileMaker<br>development skills) | Limited customization natively<br>(More extensive customizations<br>are possible, but require Quick<br>Base and web development skills) | Limited customization natively<br>(Further customizations are possible, but<br>require Drupal and web development<br>skills) |
| Best suited for...                                                               | Desktop or mobile<br>applications for single users<br>or workgroups                                                                                                    | Web-enabled or mobile single-user<br>and workgroup applications                                                                         | Web sites with limited data processing<br>features (such as web forms)                                                       |
| Web-accessible                                                                   |  <sup>5</sup>                                                                       |                                                      |                                         |

|                                                    |                                                                                                                                   |                                                                                                             |                                                                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application templates available</b>             |  6                                               |  7                         | <br>Limited template options                                             |
| <b>Supports Touchstone Authentication</b>          | <br>No, but does support Kerberos authentication |                            |                                                                          |
| <b>Supports web forms</b>                          |  5                                               |                            |                                                                          |
| <b>Outbound connectivity</b>                       | ODBC<br>REST API                                                                                                                  | REST API                                                                                                    |                                                                          |
| <b>Inbound connectivity</b>                        | ODBC<br>Able to consume web services                                                                                              | Limited to specific applications                                                                            |                                                                          |
| <b>Supports Data Warehouse integration</b>         |                                                  | <br>Not at this time       |                                                                          |
| <b>Supports Cybersource credit card processing</b> |                                                  |                            |                                                                          |
| <b>Supports MIT Events Calendar integration</b>    |                                                  |                            |                                                                          |
| <b>Developer referrals available</b>               | <br>Available through IS&T                       | <br>Available through IS&T | <br>Available through <a href="#">Communications Production Services</a> |
| <b>Training Resources</b>                          | Comprehensive user and developer training curricula available <sup>8</sup>                                                        | Help documentation, online and classroom training curricula available <sup>9</sup>                          | No training curriculum is available, but most users will learn everything they need from the <a href="#">DrupalCloud documentation</a> .                    |
| <b>On-Campus expertise</b>                         | Large community of on-campus users and developers, FileMaker User Group                                                           | Small user base, but expected to increase with time                                                         | Active peer-support forum                                                                                                                                   |

<sup>1</sup> FileMaker Pro is available for free for faculty, staff, and students; FileMaker Server is only available to faculty and staff. MIT has a very limited number of FileMaker Server licenses. If you are interested in obtaining FileMaker Server, please contact [filemaker-support@mit.edu](mailto:filemaker-support@mit.edu).

<sup>2</sup> MIT's centralized license covers a limited number of applications. If your Department, Lab or Center is interested in building a Quick Base application, please contact [quickbase-support@mit.edu](mailto:quickbase-support@mit.edu) to discuss.

<sup>3</sup> FileMaker solutions that do not need to be shared (single-user, or accessed from a single machine) can be run using FileMaker Pro, and do not need to be hosted. IS&T recommends that all shared solutions be hosted on FileMaker Server in a [properly-maintained server environment](#). The cost for IS&T-managed hosting is evaluated on a case by case basis. If you are interested in managed hosting, contact [filemaker-support@mit.edu](mailto:filemaker-support@mit.edu).

<sup>4</sup> Drupal Cloud sites come with a basic template and configuration, so at a minimum, you need only provide your content. Additional Drupal configuration is possible for advanced users.

<sup>5</sup> FileMaker does have web capabilities (WebDirect, custom web publishing), but other technologies at MIT, including those listed here, may be more appropriate and cost effective depending on whether your users are MIT staff or anonymous and if anonymous users, how many.

<sup>6</sup> Built-in starter solutions and community-supplied solutions can be found at [Made for FileMaker](#) and [Modular FileMaker](#).

<sup>7</sup> Community-supplied solutions in the [Quick Base Exchange](#).

<sup>8</sup> Options include [LinkedIn Learning](#), the [FileMaker Training Series](#), and other 3rd party providers

<sup>9</sup> Online and classroom trainings are available. See the [Quick Base Resources page](#)