Magical migration:
Unlock your Access database
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## Contents

**Data is digital oil**  
4

The Microsoft Access problem  
5

The citizen developer solution  
5

The case for cloud-based web apps  
6

**6-step magical migration**  
8

Step 1: Register then upload your Access database schema  
8

Step 2: write your requirements backlog  
9

Step 3: switch on predefined behaviours and streamline your business process  
10

Step 4: create a user interface using the Diagram Editor  
10

Step 5: code-level customisation (optional)  
10

Step 6: deploy  
11

**Non-developers + AI-powered bots**  
12

What behaviours can I add with a click?  
13
Data is digital oil

We live in a fast-paced, complex world of increasingly connected people and things. Businesses and individuals create ever larger digital footprints. To thrive, businesses need to make sense of big and fast-moving data: accessing insights and delivering actionable intelligence when and where it’s needed.

United Postal Service (UPS) has invested billions of dollars into analytics and captured over 17 petabytes of data (equivalent to 225 years of high-definition video). Using this data, UPS annually saves 38 million litres of fuel and delivers 350,000 more packages.

Data capture and analysis provides a competitive edge. This is especially true for small and medium-sized enterprises (SMEs).

There is a lag, however, between recognition and action. Many businesses self-report a block: the perceived costs of becoming data-driven. These businesses, those talking about obstacles, are ignoring the real costs of failing to unlock your data.
The Microsoft Access problem

Data is digital oil, and like oil, requires tools for extracting, storing, and refining. Many SMEs have selected Microsoft Access, and in doing so have made finding a competitive edge in analytics impossible.

You don’t need mountains of data or hordes of data professionals to make insights. You simply need to be asking the right questions and delivering your answers when and where they’re needed. SMEs are just as capable of being data-driven as Fortune 500 companies (such as UPS). The problem is Access.

Access stores data locally. It cannot integrate with many common technologies. These issues alone are serious impediments for any business in a data-driven economy. To draw conclusions from your data, you need to be able to access your data.

The solution for SMEs comes from an unlikely source: non-developers operating within your business – citizen developers.

The citizen developer solution

Tech-savvy employees and owners transform into citizen developers when they create and edit software with only a little
technical know-how. All these citizen developers need is the right set of tools: software for making software.

Software and apps (e.g. Facebook) are databases with a user interfaces and complex behaviours. Traditionally, only experienced developers and designers could create these components. Now, citizen developers can create each of these using low-code platforms, such as Codebots.

The downside of these platforms has always been exclusivity; nothing gets in, and nothing gets out. For businesses stuck on Access, getting stuck on another platform is an unappealing solution. Uniquely, Codebots users can unlock existing Access databases by migrating them to the cloud, and transforming them into web-based applications. This transformation requires no coding experience. You can achieve this with the power of code-writing bots.

**The case for cloud-based web apps**

All businesses (big and small) need software for managing data. The question is, where will this software come from? There are two possibilities: create your own solution or buy one off the shelf. The former is expensive and the latter seldom user friendly. Faced with this hard choice, many businesses have attempted to forge a new path with Access.
The problem with Access is efficacy. Access extracts, stores, and refines data, however, its capabilities have a low-ceiling. This is because it’s a database management system (DBMS) with only simple, app-like capabilities. To compete on analytics, and empower your workforce, you need custom software.

Software has an air of mystery. Fundamentally, however, it’s simple.

All applications are comprised of objects, which have two basic properties: state and behaviour. An object’s state is defined by its attributes, which are distinguishing features. An object’s behaviour defines functionality and use. For example, we have an object called “Car”. Car is red, a Holden, and a Commodore. This is state. Car can also move and make turns. This is behaviour.

If you have Access databases, you probably already have your state. For example, stores have sales, sales have products, products have inventory. However, your business is probably lacking in behaviour. For example, automatically updating your inventory after a sale and delivering alerts when prices change.

Uniquely, Codebots can unlock your existing Access databases by migrating your state to the cloud. Codebots users can choose from more than a dozen complex behaviours, and add these with a click.
Unlocking your data and finding your edge has never been easier for businesses stuck using Access databases. Begin by migrating your database schema to the cloud in a single click. Then transform your existing Access database into a cloud-based web application using drag and drop interfaces. No coding experience is required to unlock your data and find your edge. The age of the citizen developer is now!

**Step 1: Register then upload your Access database schema**

Once you’ve registered at codebots.com, upload your Access database schema. Codebots creates your MySQL schema. You can update it using the Interface Builder.

Once you have made your desired updates, click build and watch the fireworks as AI-powered bots write thousands of lines of code on your behalf.

You now have a cloud-based database and web app back-end.
Step 2: write your requirements backlog

An app is a database with a unique user interface and behaviour. You already have your database (step 2), now all you need is a user interface and behaviour.

Begin by breaking your requirements into a series of Epics (categories) and User Stories (user actions).

Think of your epics as items on a shopping list (e.g. milk) and your user stories as qualifiers for your items (e.g. full cream).
<table>
<thead>
<tr>
<th>User Story 1A - register</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Story 1B - Facebook Login</td>
</tr>
<tr>
<td>User Story 1C - password recovery</td>
</tr>
</tbody>
</table>

Write these in human language directly into Codebots. While you’re creating your app you can test your progress towards these goals in real time.

**Step 3: switch on predefined behaviours and streamline your business process**

Once you have defined your requirements, switch on your desired behaviours using the Diagram Editor. This is when magic happens. Add Timelines and Dashboards to your state, and give your business stronger analytics capabilities in a click. No coding is required, only drag and drop.

**Step 4: create a user interface using the Diagram Editor**

Once you have switched on your desired behaviours, toggle your view on the Diagram Editor from Schematic to Interface Builder. Once again, no coding is required, only drag and drop.

**Step 5: code-level customisation (optional)**

Codebots solves many business challenges using the Diagram Editor (steps 3 and 4). However, every business is unique. In some cases, your business challenge requires code-level
customisation. Codebots writes 100% human readable code: you can customise your codebase after the codebot has finished writing. The codebots will work alongside you.

**Step 6: deploy**

Once you have finished augmenting your codebase with custom code, click build and deploy your app to the cloud.

Congratulations, you have transformed your desktop-based database into a cloud-based web app. You are now ready to compete on analytics and find your edge.
Non-developers + AI-powered bots

All businesses (big and small) need software for managing data. The question is, where will this software come from? There are two possibilities: create your own solution or buy one off the shelf.

Traditionally, building apps has been slow and expensive. This has changed.

A myriad of tools have simplified and streamlined the process. Codebots unites these advances and goes further.

Basically, apps are databases with a user interface and complex behaviours. Traditionally, only experienced developers and designers could create these components. Now, citizen developers can create each of these using low-code platforms, such as Codebots. This represents massive potential savings. Tech-savvy professionals can complete these phases with minimal expert oversight and assistance.
If you go with off-the-shelf software then you’ll be stuck (again) with no potential for driving business growth, improving your technology, and finding your competitive edge.

**What behaviours can I add with a click?**

Once you’ve migrating your database and processes over to your web app, you will need to add behaviour to your data.

Traditionally, this has been the hard part, where you normally need a developer. However, Codebots comes prepackaged with 12 behaviours. And more are on the way.

Other stakeholders: IT departments and project managers
Citizen development is already a reality in many businesses. According to research by Gartner, more than 50% of respondents knew of active citizen developers within their business. Unfortunately, only half of these said IT was involved in citizen developer initiatives. Both of these numbers are too low.

Citizen developers are an amazing, undervalued resource. However, best practices require IT departments and managers be involved as well. To this end, Codebots supports all three of these stakeholders.
<table>
<thead>
<tr>
<th>For IT departments</th>
<th>For project managers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dashboards</strong></td>
<td><strong>Requirements backlog - epics and user stories</strong></td>
</tr>
<tr>
<td><strong>Code-level customisation</strong></td>
<td><strong>Testing tools</strong></td>
</tr>
<tr>
<td><strong>Deploy environments</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Traditional software development**

- Planning
- Research
- Prototyping
- Development
- Testing
- Launching

**With a whole suite of third-party selections**

- Planning
- Research
- Prototyping
- Development
- Testing
- Launching

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**Documents**

**Spreadsheets**

**Calendar**

**Timelines**

**Shared library**

**Booking**

**Gallery**

**Dashboards**

**Site funnels**

**Security**

**Location**

**Notifications**

**Workflows**

**Mobile apps**

Non-developers + AI-powered bots
Find your edge with Codebots

Software is a database with a user interface and behaviour. You can create all three of these components on Codebots.

Codebots enables tech-savvy citizen developers to solve business challenges independently. The core challenge facing businesses is unlocking their data and competing on analytics. To be competitive, businesses need easy-to-use and maintain software for extracting, storing, and refining their data.

By turning their old Access databases into web apps using Codebots, businesses can:

- Unlock their data and compete on analytics.
- Build apps faster and with no code.
- Customise every aspect of their technology for maximum efficiency.
- Monitor and manage their technology with dashboards.
- Maintain their apps more easily with automated testing and environments.
Interested in using Codebots in your business?

Sign up for early access
Follow our journey

codebots.com