DB3 – Azure Migration Scripting Write-up

Finn Armstrong-McAllister

Now that our group has an understanding of what this process is going to involve, we’re able to begin planning some of the finer details. After speaking with Krissi, our client, we determined that we would need to host an SQL server via Docker, which would then need to be populated with the correct data based on the new students coming in. It was very quickly realized that we would need a script in order to automate the process.

When looking around through prior work done by the Devop’s group, we came across instructions and old scripts for a very similar task, however focusing on Databases 2 over Databases 3. This gives us a basic outline that I was able to use to plan out what had to come next. While retrofitting it to match DB3 is a possibility, I feel like it would be much easier and cleaner to simply create a script focused on this exact problem.

A requirement that I have to keep in mind is that DB3 students start the semester with access to a basic database already loaded up and ready for them to access. As such, we will need to ensure that this database is created and appropriate permissions are given to each student.

Passwords are given to each student in order to access the SQL server. These will be created and assigned to each student and will need recorded. Students are given these passwords in plaintext at the start of the semester, being advised to change them right away, so keeping these completely hidden is not required.

I’ve included a basic skeleton for the script that I will need to create.

* Load in a Excel spreadsheet containing information on students coming in.
* Extract their relevant information via sub-strings and store in an array.
* Inside of a ‘for-each’ loop, create a database for each student (IN705\_202001\_<student-code>), then execute a SQL query in order to populate the database.
* Generate and store passwords and logins for each student.
* Create an account for each student on the SQL server using the appropriate information.

Additionally, I would like to create a separate script for adding individual missing students. I intent to thoroughly comment both scripts, as well as creating an instructional document for students to use in the future.

**Tl;dr**

I have determined what needs to be done in order for this task to be automated in the future. I plan to create a script to execute our solution as well as instructions for Devops students in the years ahead of us. I have considered security and possible late registrations within my solution.