Training Program

Genio Academy

Genio Certification

Full Stack Developer - Genio Level 1 (L1)

Background

Quidgest_Academy is an innovative certified training program, where software development is done through modeling rather than writing code. This completely different way of creating software uses Genio as its development platform. Genio is an extreme low-code platform, exclusive to Quidgest, which is based on modeling and artificial intelligence.

The **Full Stack Developer - Genio Level 1 (L1)** training is oriented to Genio beginners. Through it, trainees from all types of businesses learn how to develop scalable information systems as web applications. Thus, software development becomes available to a much wider range of talents and not just programmers.

Goals

- To acquire autonomy when developing software using Genio.
- Acquire (or enrich) knowledge of relational modeling.
- Acquire advanced skills in problem-solving.
- Generate a fully functional information system through development with Genio.

Modality and Training System

The training is carried out remotely and asynchronously, this means self-directed and self-paced. It does not require all the participants to be virtually present simultaneously.

Place and Time of Training

Each training course is held on an agreed date/time as per the Quidgest_Academy annual planning.

Trainees profile

The training is aimed at two target audiences:

- External trainees: training is aimed at people from any field who are interested in developing software through Genio. External trainees are usually students and/or academic professors in the ICT field, employees of partner companies (or potential partners), entrepreneurs.

Pre-requisites of trainees

There are no prerequisites for the training. However, prior knowledge of the following subjects is an advantage:

- Logical thinking
- Relational modelling
- SQL

Overall Duration

The training has a duration of four weeks to practice and develop solutions with Genio.

Equipment

The trainees should have a computer with the following characteristics:

- Microsoft Windows 10
- 8GB RAM
- I5 or equivalent
- 40GB free disk space
- Internet connection

Technical and pedagogical resources

- The E-Learning course includes documents containing theoretical material and exercises; Videos explaining the theoretical topics and solving the proposed exercises.
- One weekly meeting to cover issues and clarify doubts with a specialized trainer.

Training Methodology

The methods used are theoretical, demonstrative, and practical. The theoretical framework is followed by demonstrations of the Genio functionalities. After learning each Genio functionality, trainees consolidate their knowledge through individual practical exercises. After finishing all the exercises, trainees then go on to a final individual project that covers everything that has been learned.

Assessment Tools for the Trainee

The approval and issue of the Full-Stack Developer - Genio L1 certificate to trainees is carried out upon evaluation of the final individual projects.

Evaluation criteria (in detail in Appendix A):

- **Usability** - How easy user interfaces are to use.
- **Complexity** - The number of features used that interact with other features.
- **Quality** –Characteristics that an application should have, e.g., validation of data, robustness, and usability...
- **Model** - Graphical design of the data structure containing entities, attributes, and relationships.
- **Database Population** - Testing software by inserting data.
- **Design** - Customization of the interface.
- **Presentation/Contextualization** - Contextualize the theme, objectives, roles, personas, and main functionalities.
- **Value (Purpose/Utility)** - Definition and completeness of a purpose that is useful to the user or to the company.

Minimum requirements for final project web app
1. At least 5 tables
2. Functionalities applied to the table: – Business Rules – Formulas – Write conditions – Display conditions
3. Functionalities in the forms: – Changing the design of forms using the form editor – Applying different types of forms – Applying different types of fields – Creating tables (*table list*)
4. Menu Features: – Create submenus consistent with customer needs – Use the standard "table within a table" - table related to another table – Add background color conditions – Add filters – Apply different access levels
5. Design Criteria: – Change the primary and secondary colors of the application design – Change the default layout – Change the logo and background images

Training Assessment Tools

Evaluation of Training Quality - carried out through a questionnaire survey to trainees and the trainer. This survey is done at the end of the training activities and consists of closed and open questions (for appreciation, suggestions, and complaints, among others).

Program Content

Full Stack Developer - Genio L1

Module 1: Introduction to Genio

Length: determined by the trainee

1. **Introduction to Genio Academy**
    - Introduction to Quidgest.
    - Introduction to Genio.
    - Format and objectives of Full Stack Developer - Genio L1 training.

2. **Relational Model**
    - Introduction to the relational model.
    - Primary Keys and Foreign Keys.
    - Types of relations between tables.

3. **Genio**
    - Creating and removing tables, forms, and menus in Genio.
    - Best Practices when developing with Genio.

At the end of Module 1 the learner should be able to:

- Be contextualized in relation to Quidgest, Genio, and the purpose of the training.
- Understand the theory behind the relational model.
- Create and remove tables, forms, and menus in Genio.
- Remember the good practices of developing in Genio.

Module 2: Practicing with Genio
Length: determined by the trainee
1. How to create a new project. **2. Genio Databases** • Introduction to a project database. • Genio database in SQL Server (*SSMS*). • Client database in SQL Server (*SSMS*). **3. Debugging Errors in Genio** • Identify warnings and errors in GenRules. • Identify warnings and errors in the Errlog.
At the end of Module 2 the learner should be able to:
• Query the databases (Genio and Client) of a project in SQL Server (*SSMS*). • Identify possible warnings and errors in GenRules and Errlog.
Module 3: Tables
Length: determined by the trainee
1. Table Features: • Creating business rules. • Creating database fields. • Creating different types of keys. **2. Implementation of a relational model**
At the end of Module 3 the learner should be able to:
• Create a new project in Genio. • Create relationships between multiple tables.

Module 4: Forms
Length: determined by the trainee
1. Forms features • Changing the design of forms using the form editor. • Applying different types of forms. • Applying different types of fields. • Creating tables (table list).
At the end of Module 4 the learner should be able to:
• Create different types of customized forms. • Apply different types of controls (fields, groups, etc.).
Module 5: Menus
Length: determined by the trainee
1. Menu Features • Create submenus. • Use the "table within a table" pattern - table related to another table • Import and export data. • Apply access levels.
At the end of Module 5 the learner should be able to:
• Create different types of menus and submenus. • Apply menu standards. • Create and apply menu access levels.

Module 6: Formulas and functions
Length: determined by the trainee
1. Calculation and Filtering Patterns • Implementing different formulas. • Applying write conditions. • Applying display conditions. • Adding background color conditions. • Adding filters.
At the end of Module 6 the learner should be able to:
• Apply various formulas and conditions to tables, forms, and menus in Genio.
Module 7: System customization
Length: determined by the trainee
1. Design • Change the primary and secondary colors of the application design. • Change the default layout of the interface. • Change the logo and background images.
At the end of Module 7 the learner should be able to:
• Customize the design of web applications created on Genio.
Module 8: Final Project
Length: determined by the trainee
1. Development of the final project • Design the relational model of the project. • Implement the project relational model in Genio. • Present the project for evaluation. • Backup the project.
At the end of Module 8 the learner should be able to:
• Create and present a final project that contains all the functionalities and development patterns learned during the training.