PATH ASSISTANT AT FCIT

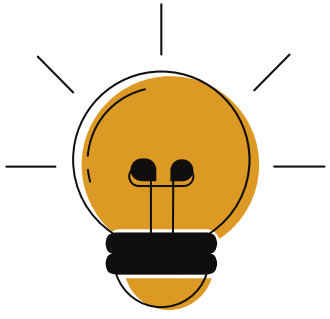
CONTENTS

1. INTRODUCTION

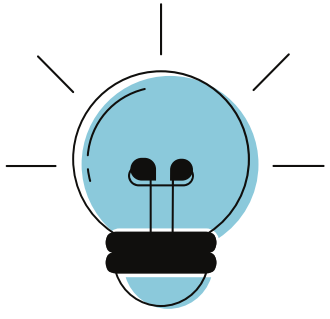
1.1 PURPOSE OF THE CHOSEN EXPERT SYSTEM

The purpose of our export system is to facilitate for students in the FCIT at KAU to choose the right path of their university major either is CS, IT or IS by knowing their tendencies in the field of computers by asking the students multiple questions and choosing the right path of major that matches with their answers.

1.2
USERS OF THE SYSTEM



FCIT Students



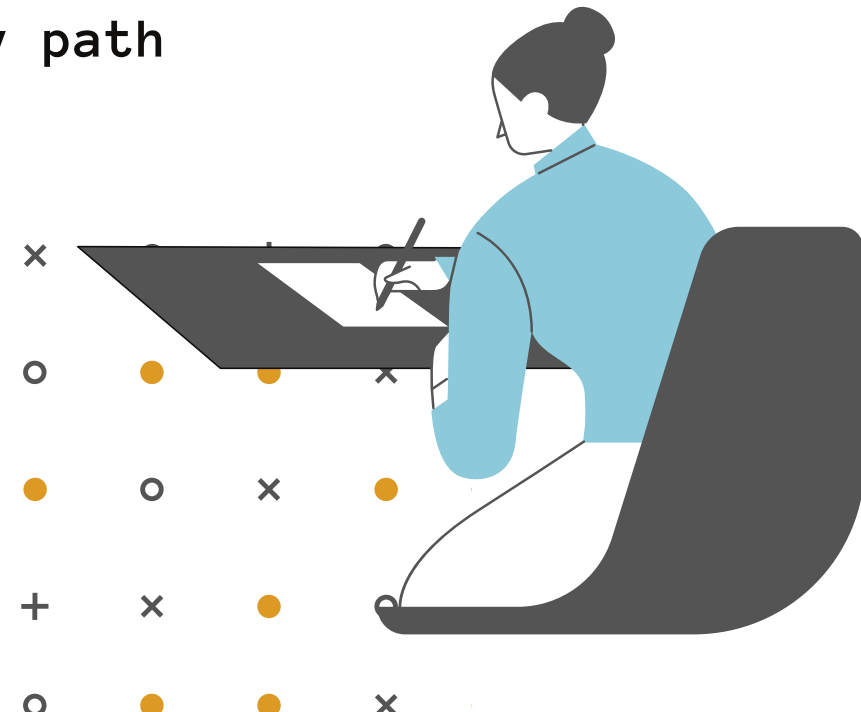
Academic Advisors

1.3 Expert(s) of The System

Determine the student’s path in FCIT based on their major and tendencies in the path of their department.

1.4 Resources

The official FCIT website includes a complete definition of the college's majors, study plans, and identification of study paths by communicating with the academic advisors in the college to identify the most important characteristics and requirements of each study path



2. PROGRAM IMPLEMENTATION IDEA

2.1 KNOWLEDGE BASE: A LIST OF RULES

1. If the student responds with the following answers:
   - Specialized in CS.
   - Interested in keeping up with technological advancements and new technologies.
   - Interested in analyzing data and predicting future information
   - Had a good background in mathematics and algorithms.

Then the student path will be **Intelligent Systems**.

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2. If the student responds with the following answers:
   - Specialized in CS.
   - had Analytical skills (the ability to analyze complex data).
   - Knowledge of network protocols.
   - Knowledge of IoT (Internet Of Things).

Then the student path will be **Computer Network.**

2.1 KNOWLEDGE BASE: A LIST OF RULES

3. If the student responds with the following answers:
   - Specialized in CS.
   - Has knowledge of data structures and algorithms.
   - Had skills in Object-oriented programming (OOP) languages.
   - Interested in text editors (editors include: Visual Studio Code Sublime Text).

Then the student path will be **Advanced Programming.**

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4. If the student responds with the following answers:
   - Specialized in IT.
   - Interested in web and mobile application development.
   - Had knowledge on database management system such as (My SQL and Oracle)
   - Had skills on Database Designing.

Then the student path will be **Database**.

2.1 KNOWLEDGE BASE: A LIST OF RULES

5. If the student responds with the following answers:
   - Specialized in IT.
   - Has knowledge of system design and implementation.
   - Interested in network support and administration.
   - Had knowledge of database systems, website design and management.

Then the student path will be **integrated Information Technology.**

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6. If the student responds with the following answers:
   - Specialized in IS.
   - Has the ability to analyze deep data by using (Models, diagrams, and Maps).
   - Knowledge of data collection and classification.
   - Has the ability to make quick and accurate decisions.

Then the student path will be **Decision Support Systems.**

2.1 KNOWLEDGE BASE: A LIST OF RULES

7. If the student responds with the following answers:
   - Specialized in IT.
   - Had communication skills.
   - Interested in data processing.
   - Knowledge of Problem-solving and critical thinking.

Then the student path will be **Development Of Electronic Systems.**

2.2 TECHNIQUES USED TO ACQUIRE KNOWLEDGE FROM SYSTEM

In our project we build the system using Backward Chaining technique by Python programming language.

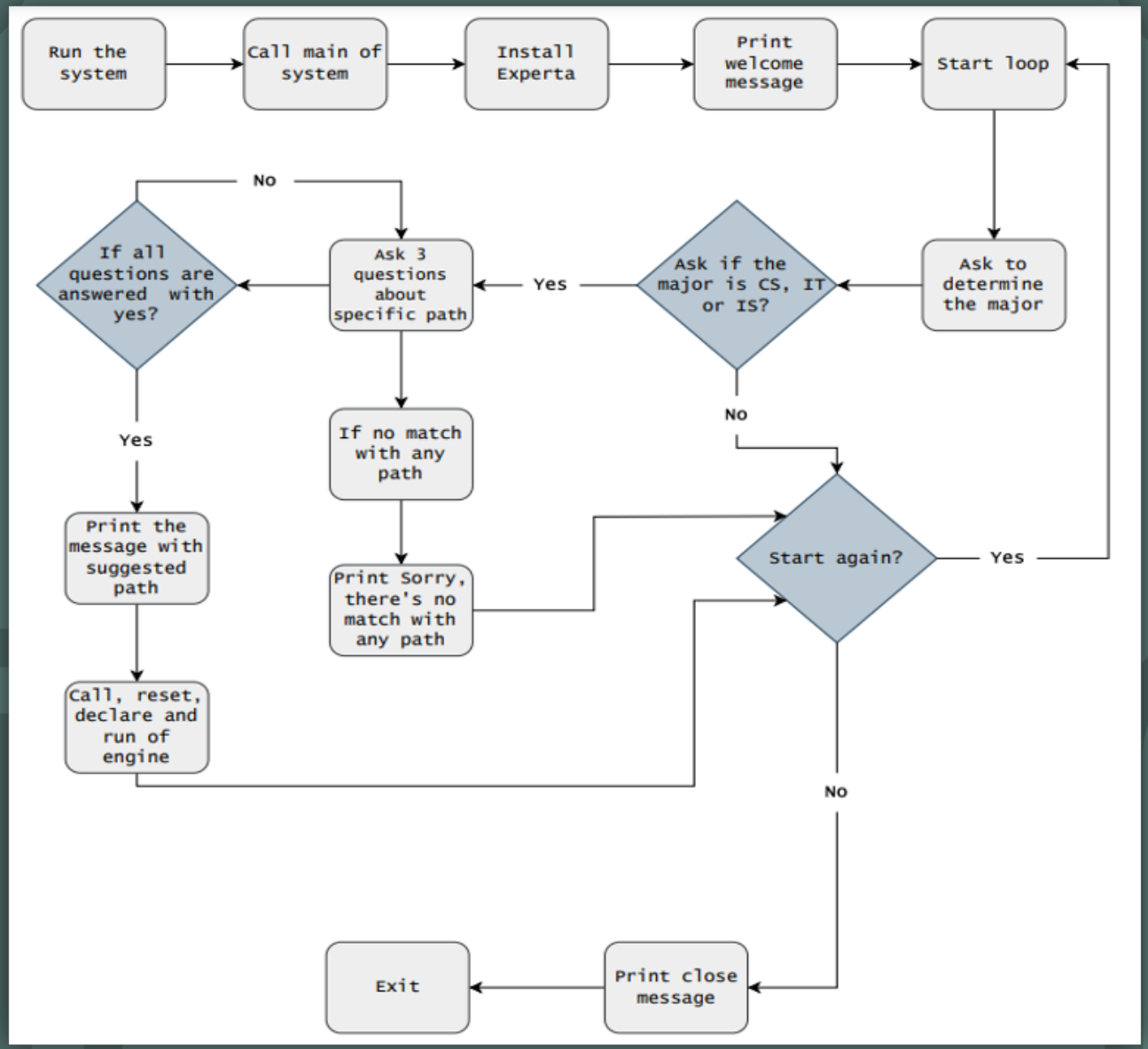
2.2 TECHNIQUES USED TO ACQUIRE KNOWLEDGE FROM SYSTEM(EXAMPLE)

For example, in our system:

A- Sara is specialized in CS.
B- Sara has Analytical skills.
C- Sara has knowledge of network protocols.
D- Sara has knowledge of IoT (Internet Of Things).
E- If a student is CS and has (Analytical skills, knowledge of network protocols and knowledge of IoT), the suggested path for him will be Computer Network.

Then
F- Sara's suggested path is Computer Network.

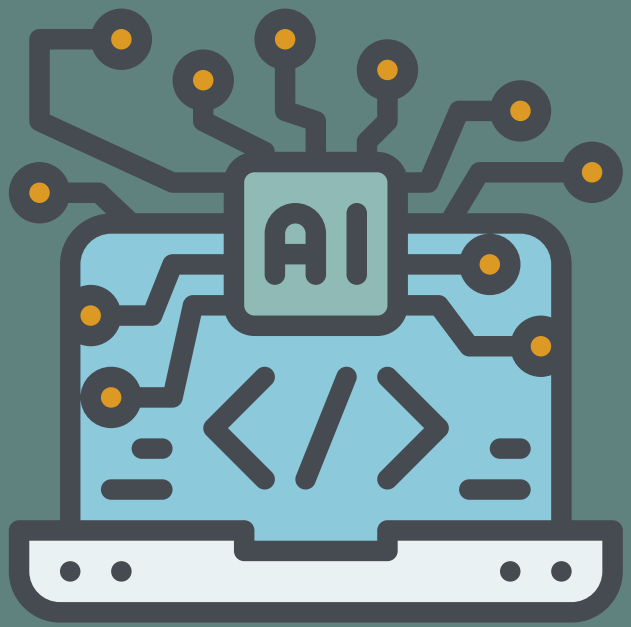
2.3 SYSTEM'S FLOWCHART (DIAGRAM)



3. PROGRAM IMPLEMENTATION CODE

3.1
SOURCE CODE

THE-SOURCE-CODE



3.2 SCREENSHOT OF SYSTEM 1

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-------                  Welcome to Path Assistant At FCIT                  -------
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What is your university major (CS / IT / IS)? CS

Do you have interest in keeping up with technological advancements and new technologies (yes / no)? yes
Do you have interest in analyzing data & predicting future information (yes / no)? yes
Do you have a good background in mathematics and algorithms (yes / no)? yes

The suggested path for you is Intelligent Systems

Do you want to start again (yes / no)? no

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-------              Thank You For Using Our System, Good Bye              -------
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3.2 SCREENSHOT OF SYSTEM 2

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-------                  Welcome to Path Assistant At FCIT                  -------
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What is your university major (CS / IT / IS)? IS

Do you have the ability to analyze deep data by using (Models, diagrams, and Maps) (yes / no)? yes
Do you have Knowledge of data collection and classification (yes / no)? yes
Do you have the ability to make quick and accurate decisions (yes / no)? yes

The suggested path for you is Decision support systems

Do you want to start again (yes / no)? yes

What is your university major (CS / IT / IS)? is

Do you have the ability to analyze deep data by using (Models, diagrams, and Maps) (yes / no)? no
Do you have communication skills (yes / no)? yes
Do you have an interest in data processing (yes / no)? yes
Do you have the ability to make quick and accurate decisions (yes / no)? yes

The suggested path for you is Development of electronic systems

Do you want to start again (yes / no)? yes

What is your university major (CS / IT / IS)? Is

Do you have the ability to analyze deep data by using (Models, diagrams, and Maps) (yes / no)? no
Do you have communication skills (yes / no)? yes
Do you have an interest in data processing (yes / no)? yes
Do you have the ability to make quick and accurate decisions (yes / no)? no

Sorry, there's no match with any path
Do you want to start again (yes / no)? no

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-------            Thank You For Using Our System, Good Bye               -------
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3.2 SCREENSHOT OF SYSTEM 3

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-------                  Welcome to Path Assistant At FCIT                  -------
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What is your university major (CS / IT / IS)? CT

Sorry, our system does not support this major
Do you want to start again (yes / no)? yes

What is your university major (CS / IT / IS)? Ai

Sorry, our system does not support this major
Do you want to start again (yes / no)? yes

What is your university major (CS / IT / IS)? IT

Do you have an interest in web and mobile application development (yes / no)? no
Do you have knowledge of system design and implementation (yes / no)? yes
Do you have an interest in network support and administration (yes / no)? yes
Do you have knowledge of database systems, website design and management (yes / no)? yes

The suggested path for you is Integrated IT

Do you want to start again (yes / no)? no

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-------             Thank You For Using Our System, Good Bye              -------
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4. REFERENCES

REFERENCES

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THANK YOU!

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