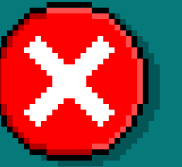
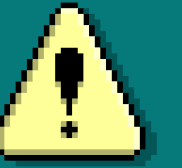
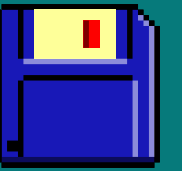


الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يُونَيْتِي إِسْلَامِيَّةٌ أَبْنَاءُ بَعْثِيَا مُلْكِيَا
Garden of Knowledge and Virtue

LEADING THE WAY
KHALIFAH • AMANAH • IQRA' • RAHMATAN LIL'ALAMIN
LEADING THE WORLD

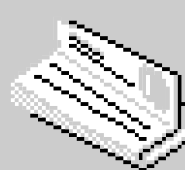
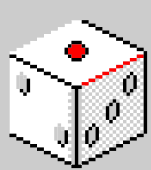
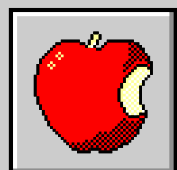


AN INTERNATIONAL AWARD-WINNING INSTITUTION FOR SUSTAINABILITY

Intelligent Heart Risk Prediction



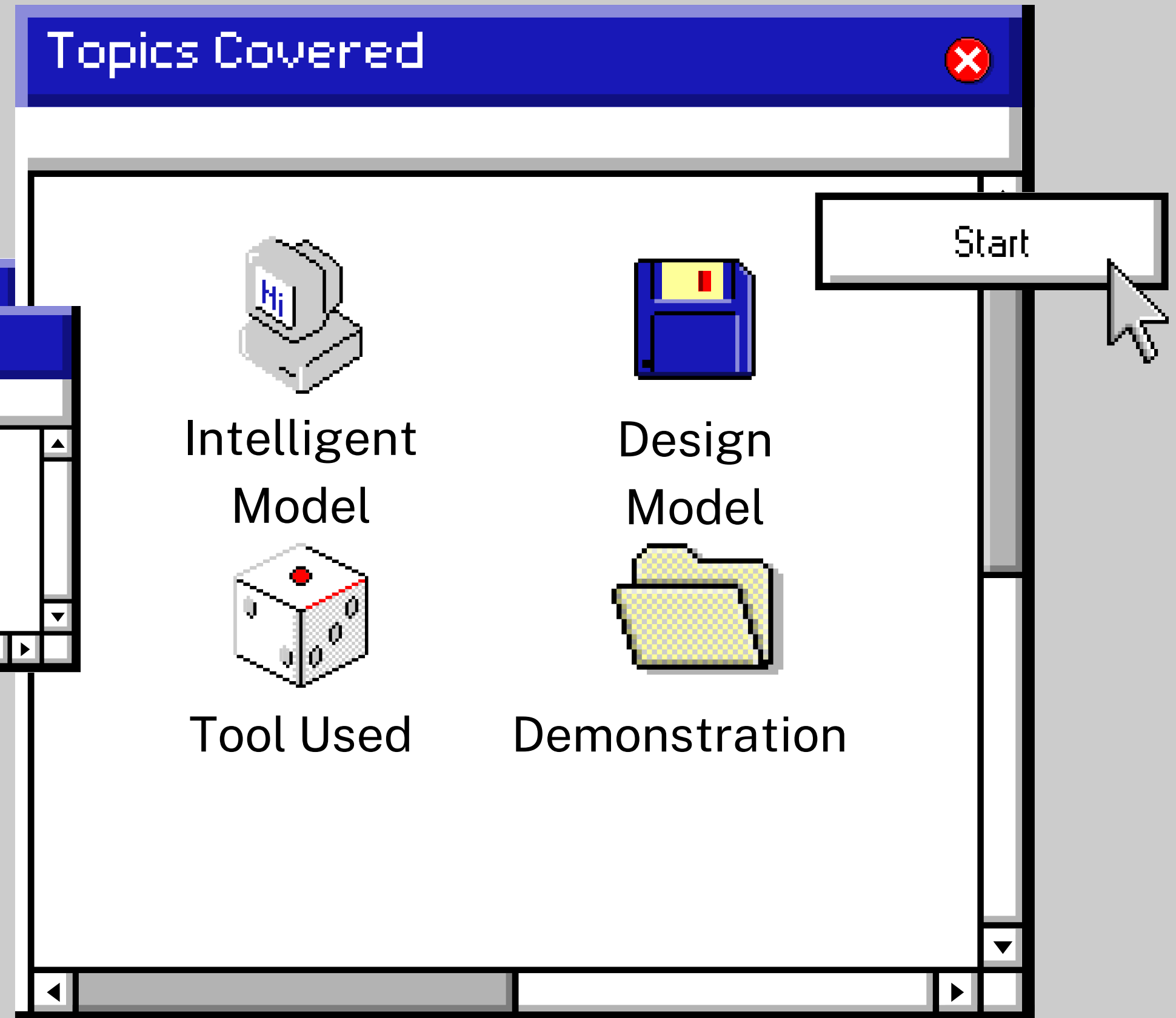
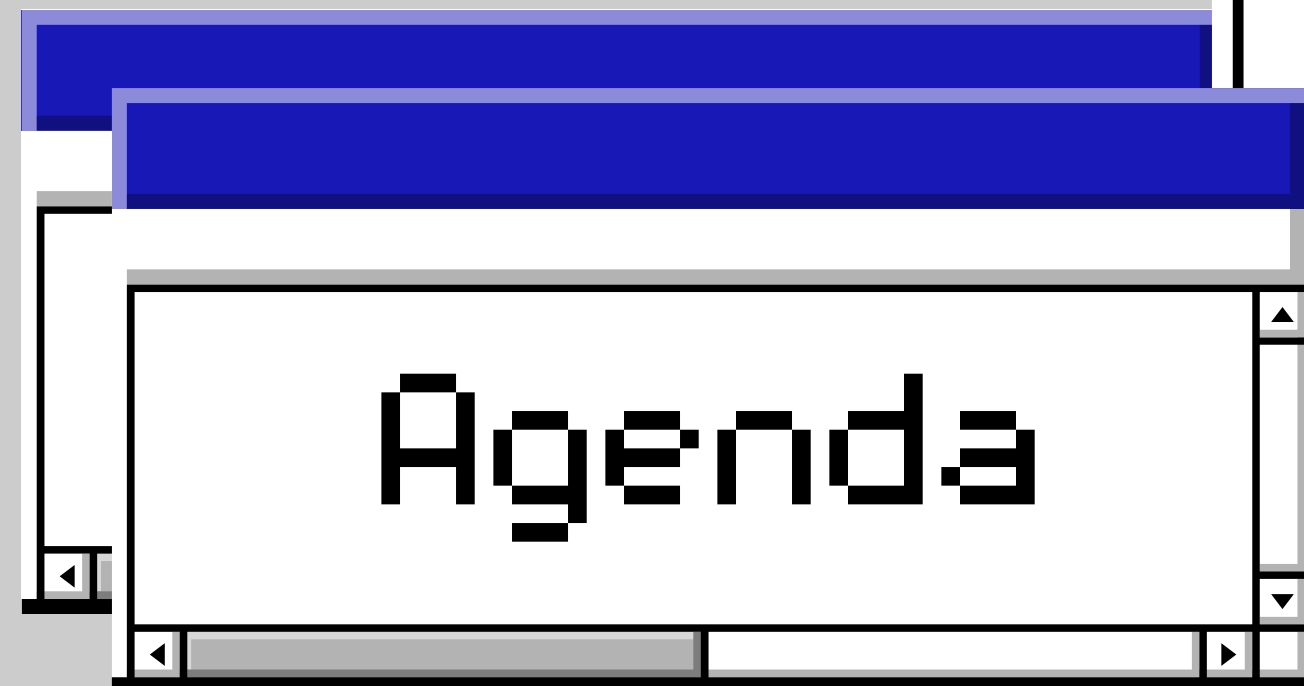
Sem 1 2023/2024



9:11AM

Tip: Use links to go to a different page inside your presentation.

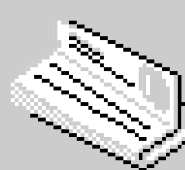
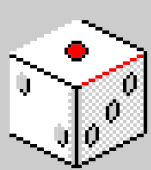
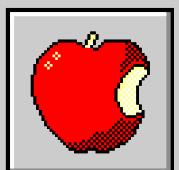
How: Highlight text, click on the link symbol on the toolbar, and select the page in your presentation you want to connect.



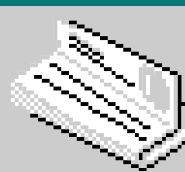
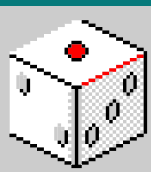
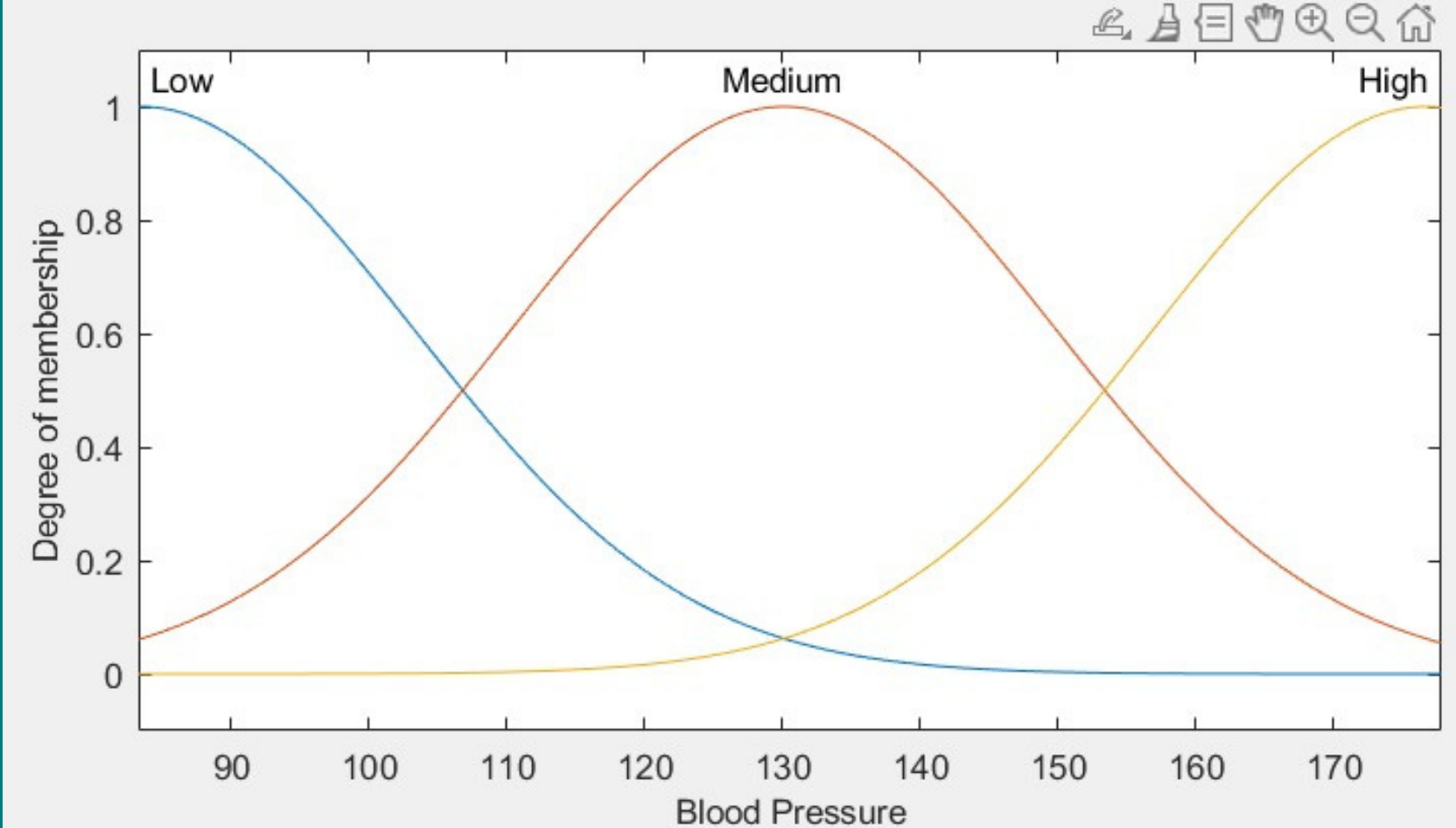
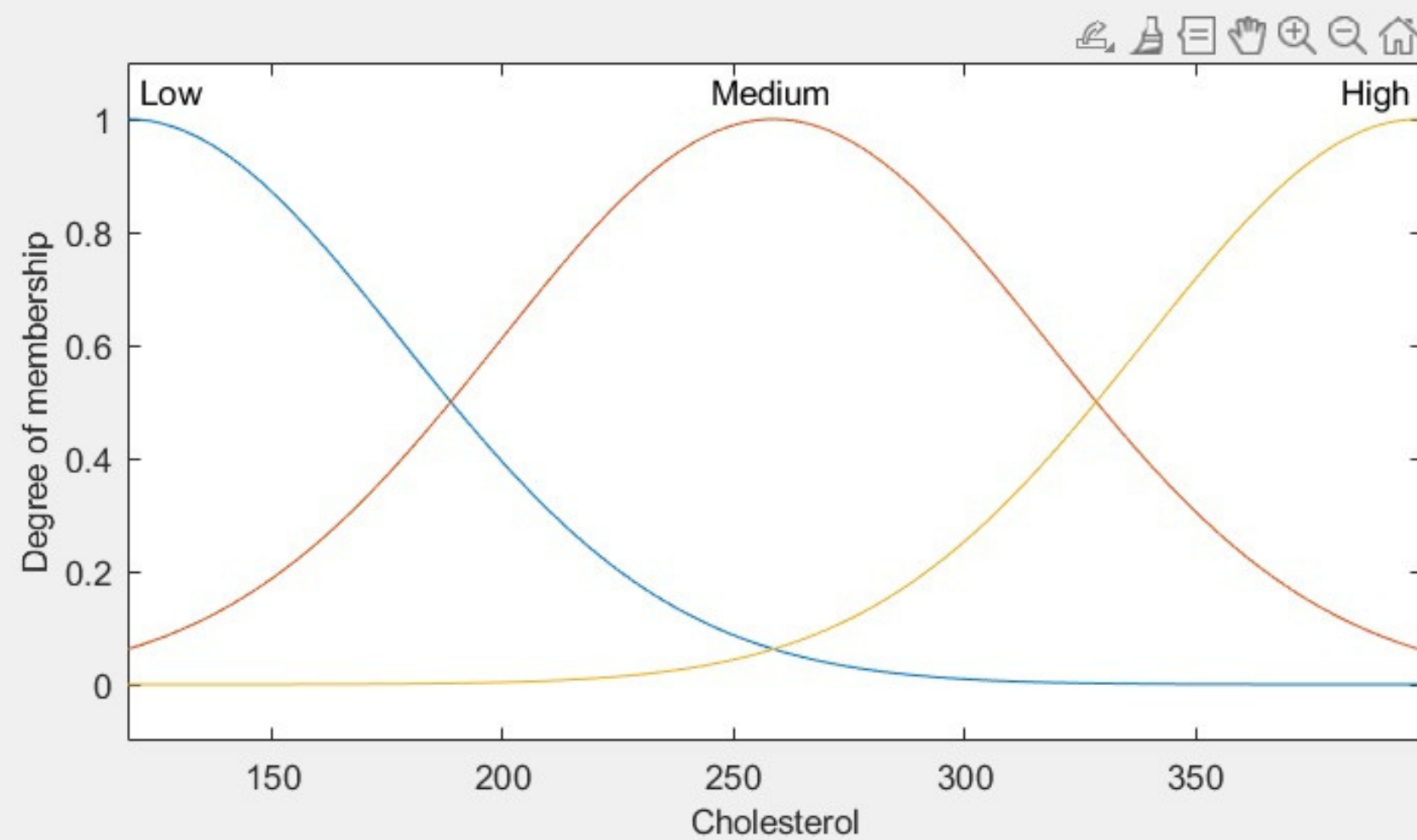
1- Intelligent Model Selection



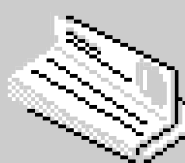
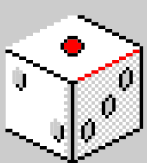
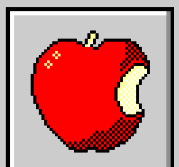
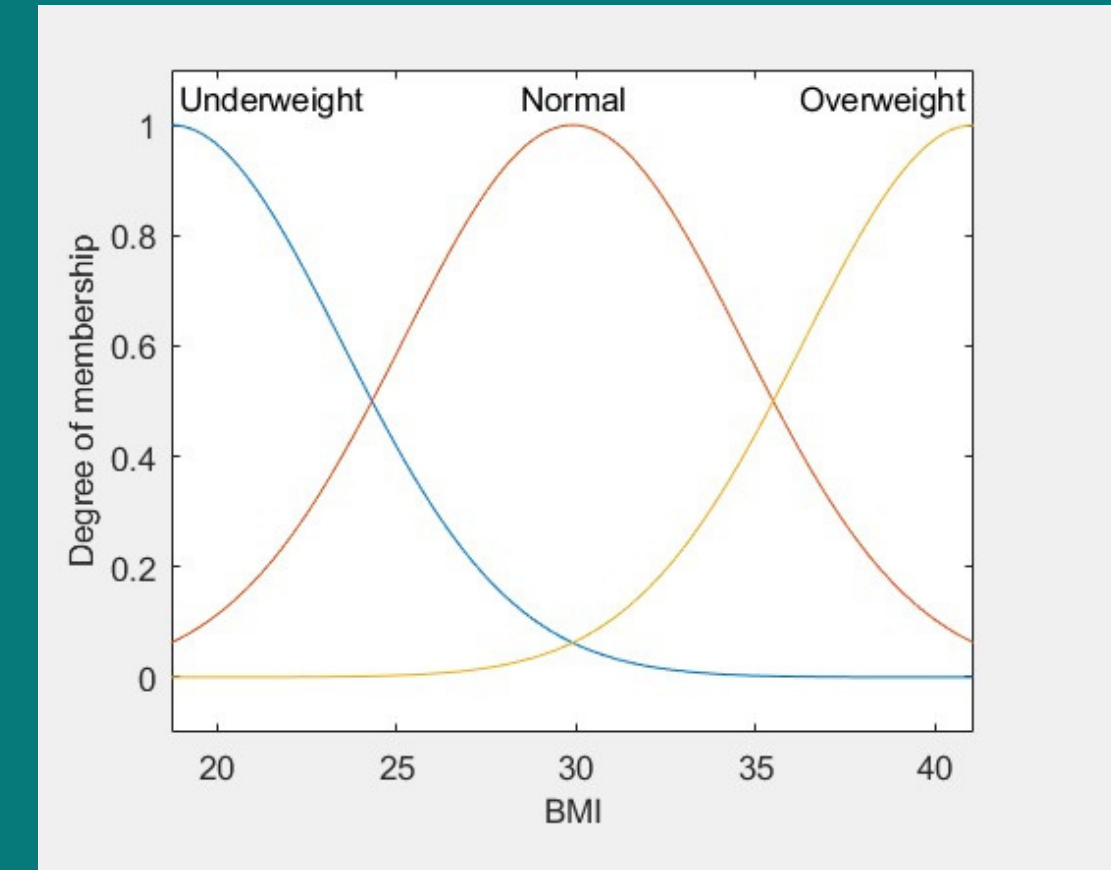
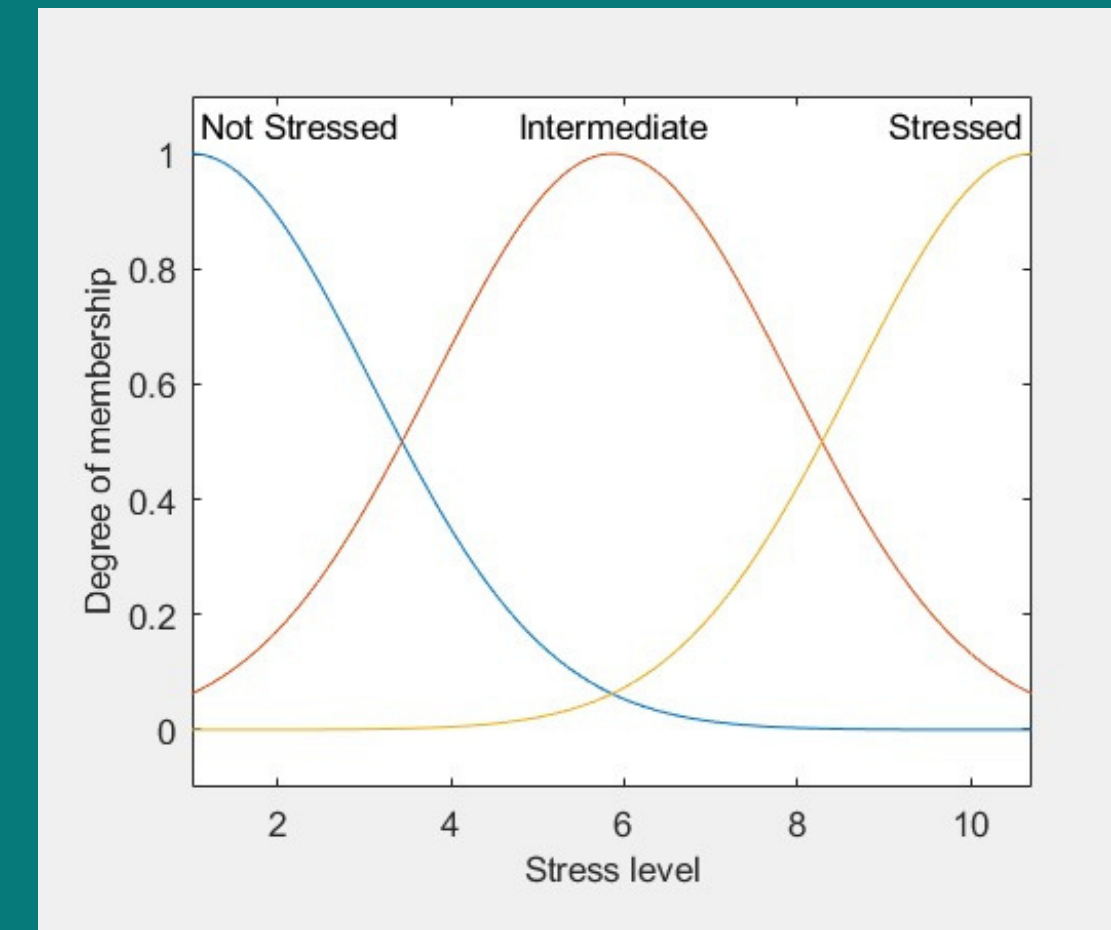
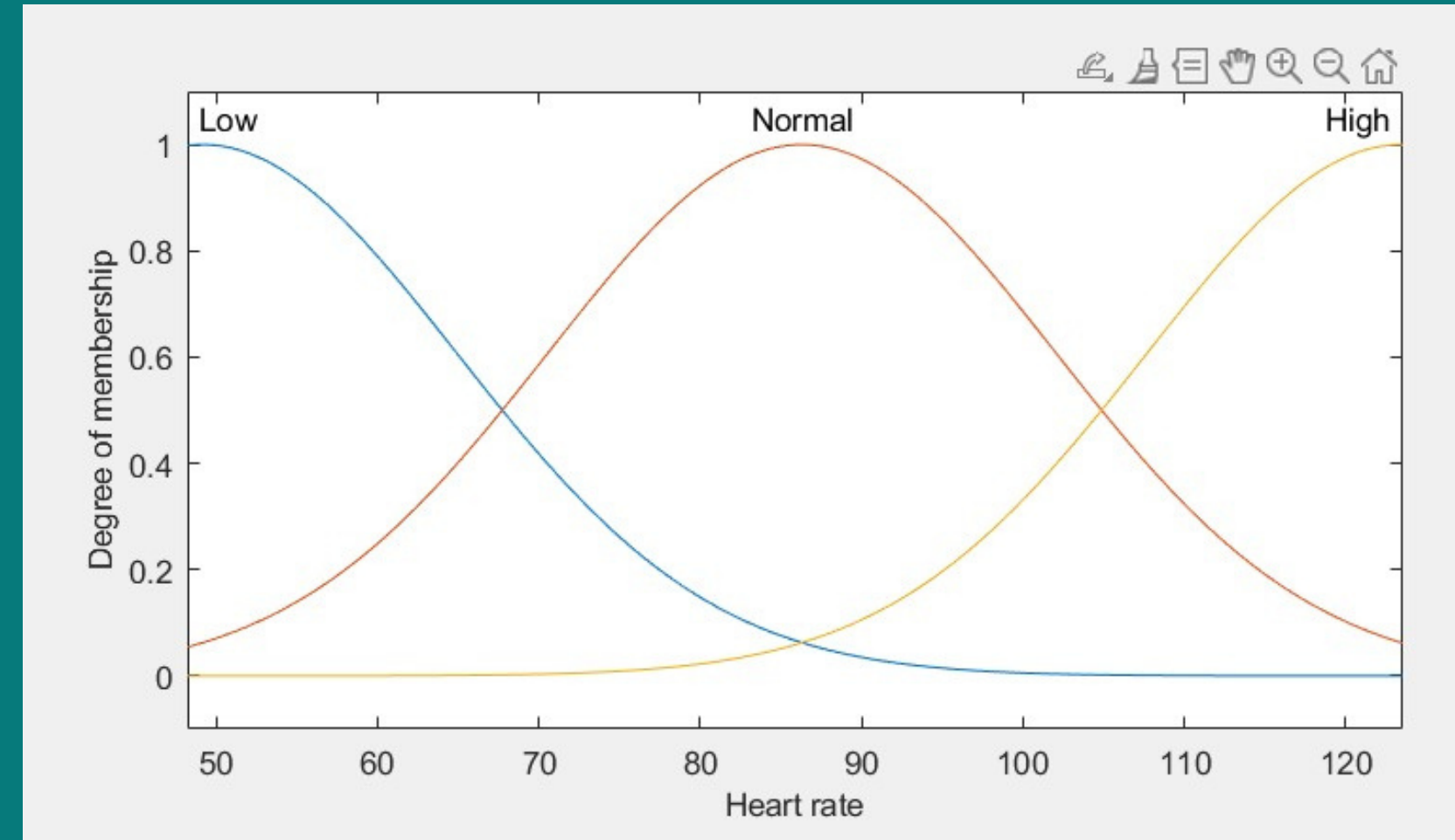
1. Smooth Transition: Gaussian functions offer a smooth transition between different membership levels, allowing for gradual changes in output as input values vary.
2. Flexibility: Gaussian functions can be easily adjusted to fit various data distributions, making them versatile for different types of datasets.
3. Widespread Use: Gaussian functions are commonly used in fuzzy logic and ANFIS applications, so there are well-established methods and tools available for working with them.



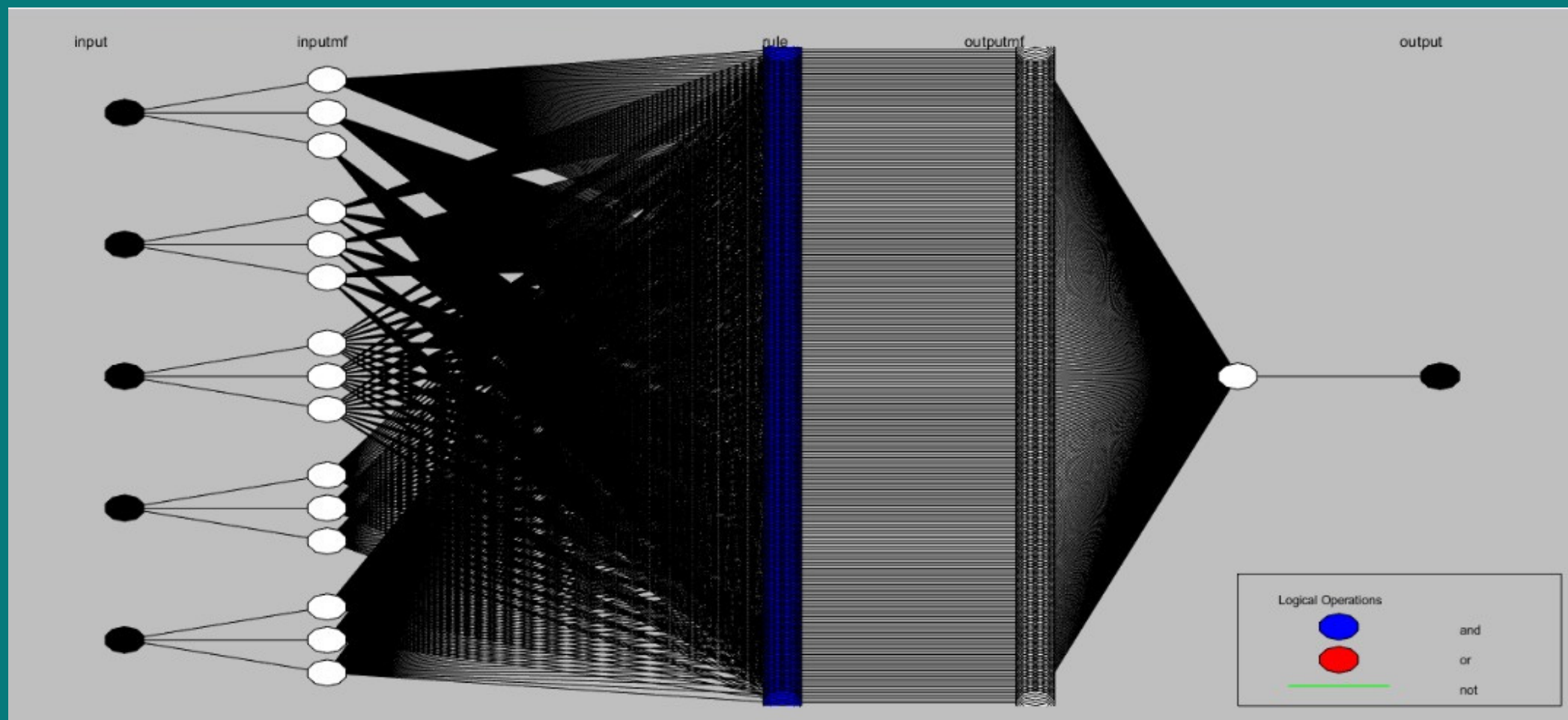
2- Design of Selected Model



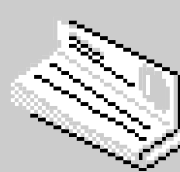
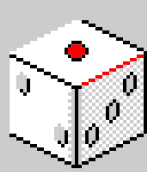
2- Design of Selected Model.



3- Hybrid Design

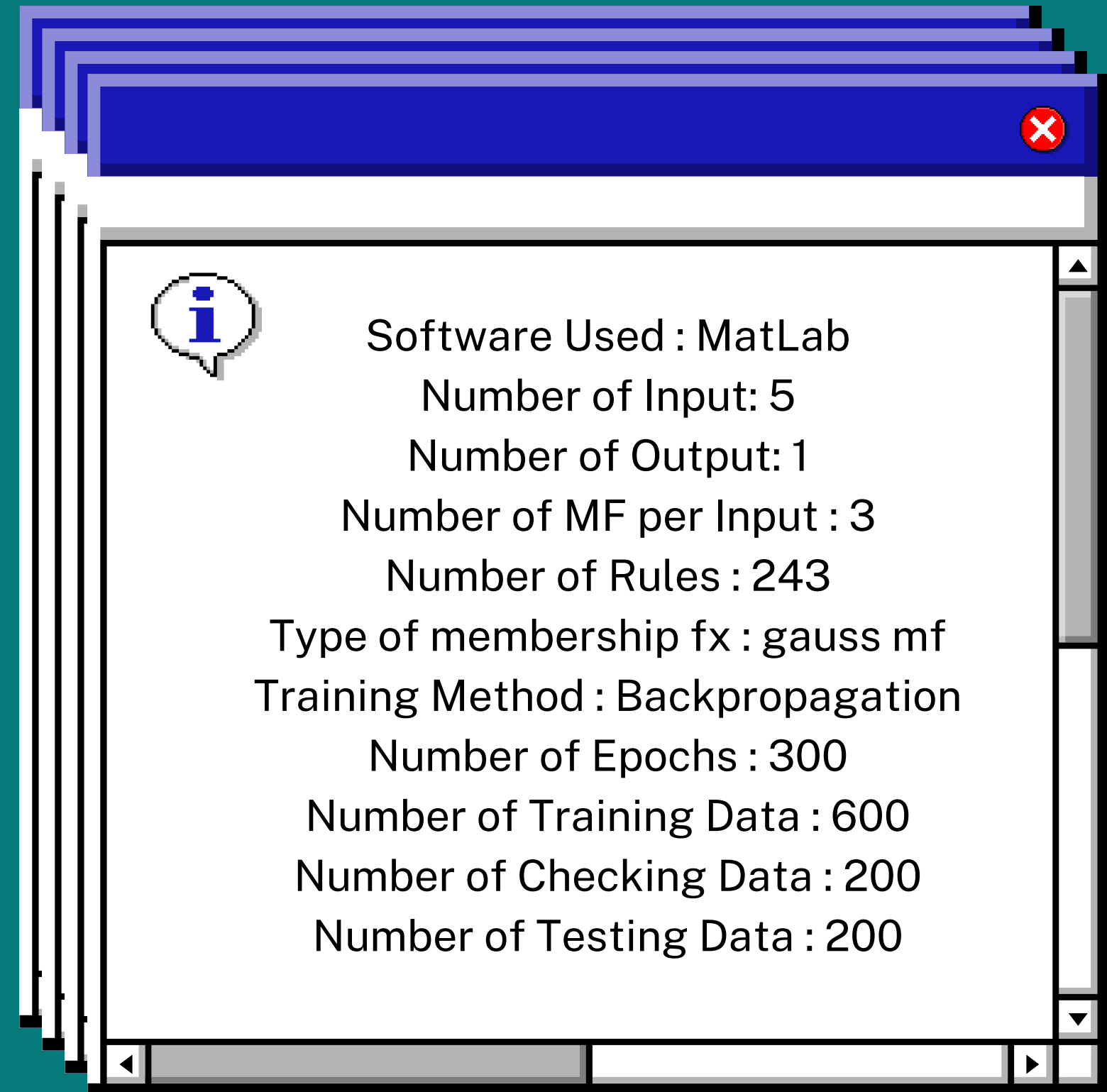


- 1. Accuracy: ANFIS (Adaptive Neuro-Fuzzy Inference System) offers high accuracy by combining the strengths of both neural networks and fuzzy logic.
- 2. Interpretability: ANFIS models are often easier to interpret and understand compared to other hybrid designs, enhancing transparency and user trust.
- 3. Learning Capability: ANFIS can adapt and learn from new data, continuously improving its performance over time.



[Back to Agenda Page](#)

4- TOOLS USED



Software Used : MatLab

Number of Input: 5

Number of Output: 1

Number of MF per Input : 3

Number of Rules : 243

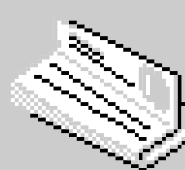
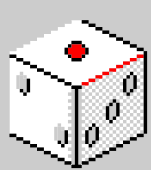
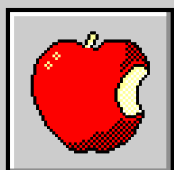
Type of membership fx : gauss mf
Training Method : Backpropagation

Number of Epochs : 300

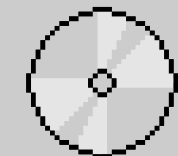
Number of Training Data : 600

Number of Checking Data : 200

Number of Testing Data : 200



[Back to Agenda Page](#)



5- TEAMWORK



MUHAMMAD SYAMIL TAMLIKHA BIN MD NASIR	AFNAN FAISAN BIN AB FATAH	ILHAM NUR AMIR BIN MISLAN	ABDUL AZIZ BIN ABDULLAH AZAHARI	AFIQ AMIRUL HAKIM BIN ABDUL HADI
Defining membership function ranges, selecting appropriate functions, and designing fuzzy part. Optimize the ANFIS model parameters through training and validation processes.	GUI designer, it involves creating user interfaces that are intuitive, visually appealing, and enhance the overall user experience of the software or application.	Designing soft computing model which is an ANFIS model. Validate the model prediction by comparing with actual heart attack data.	Assisting in ANFIS and Fuzzy-GA design. Improve training and validation model design.	Exploring alternate method for the project application (Fuzzy-GA), comparing and project documentation.

[Back to Agenda Page](#)





B-DEMONSTRATION

1	Patient ID	Age	Sex (Num)	Cholesterol	Blood Pressure	Heart Rate	Family History	Stress Level	BMI	Heart Attack Risk
2	BMW7812	67	0	208	158	72	0	9	31.2512	0
3	CZE1114	21	0	389	165	98	1	1	27.1950	0
4	BNI9906	21	1	324	174	72	0	9	28.1766	0
998	JYJ2869	88	0	137	94	110	1	7	20.1817	1
999	CPU6882	41	0	284	103	69	1	2	19.3172	1
1000	PCS6711	43	0	164	172	81	1	3	19.0683	1

