ENGR489 Project

Modelling a Self-Organising Tree

Bryony Gatehouse

Supervised by: Zohar Levi

Trees are important

Unique

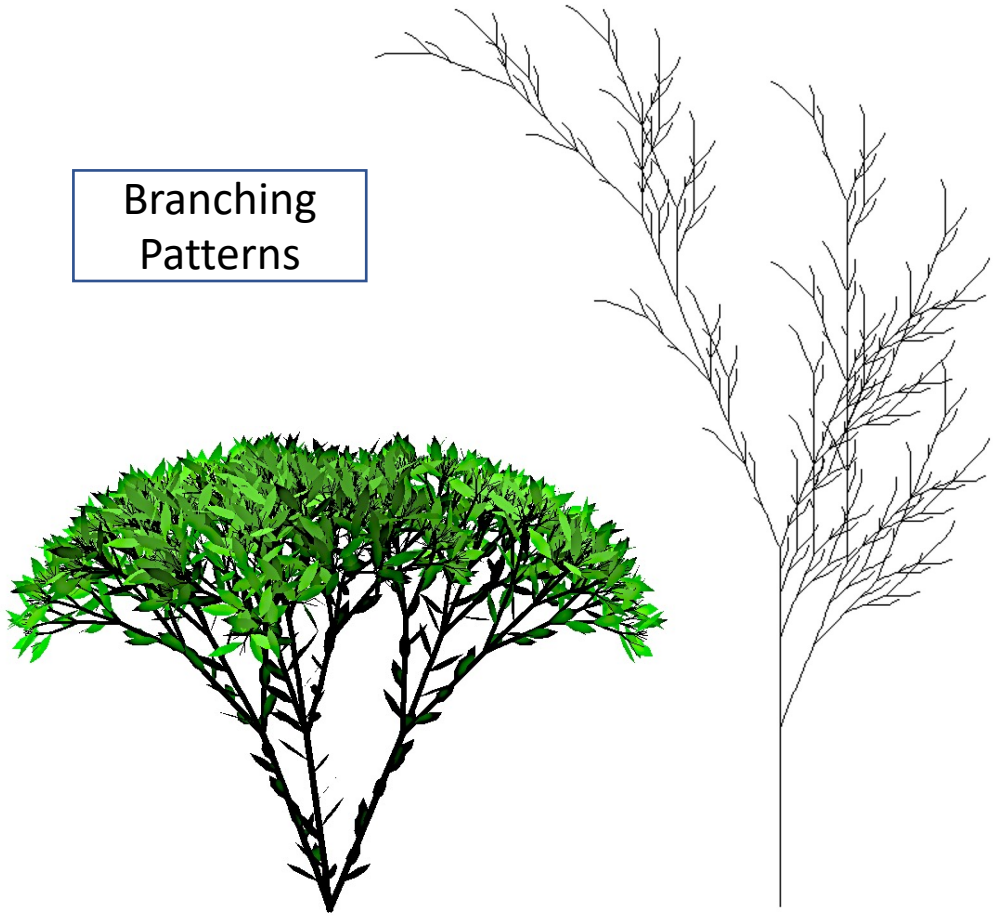
Environmental Conditions

Lindenmayer System

Rules

Pattern

Branching Patterns



Palubicki Tree

Light

Empty Space

Gravity

Calculation of Resources

Attraction Points

Allowed to Grow

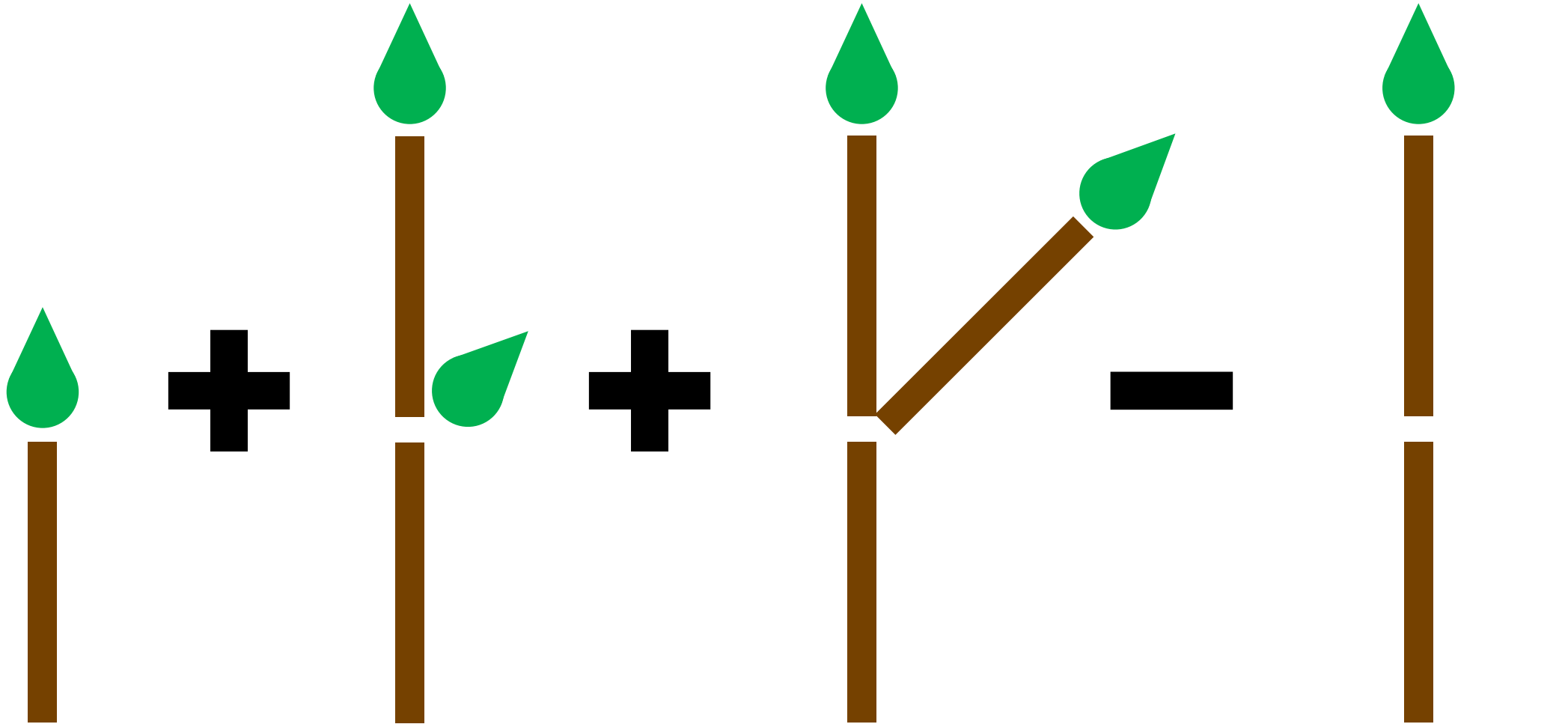
Liability of a Branch

Optimal Growth Direction

Shed Branch

Chosen Approach

Polymorphism



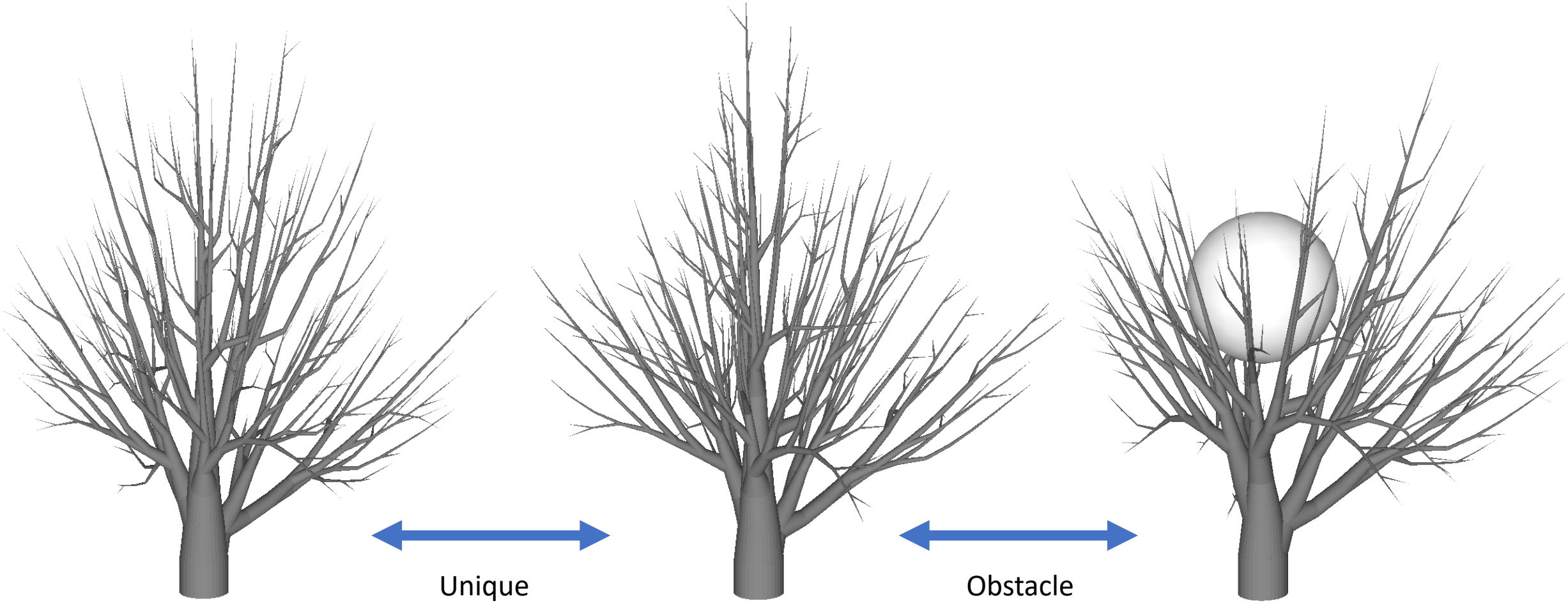
Terminal Bud

Lateral Bud

Branching Point

Non-Branching Point

Results



Conclusion

Requirements

- Unique
- Reacts to Environmental Conditions

Future Work

- Implementing Bark Texture
- GUI Interface