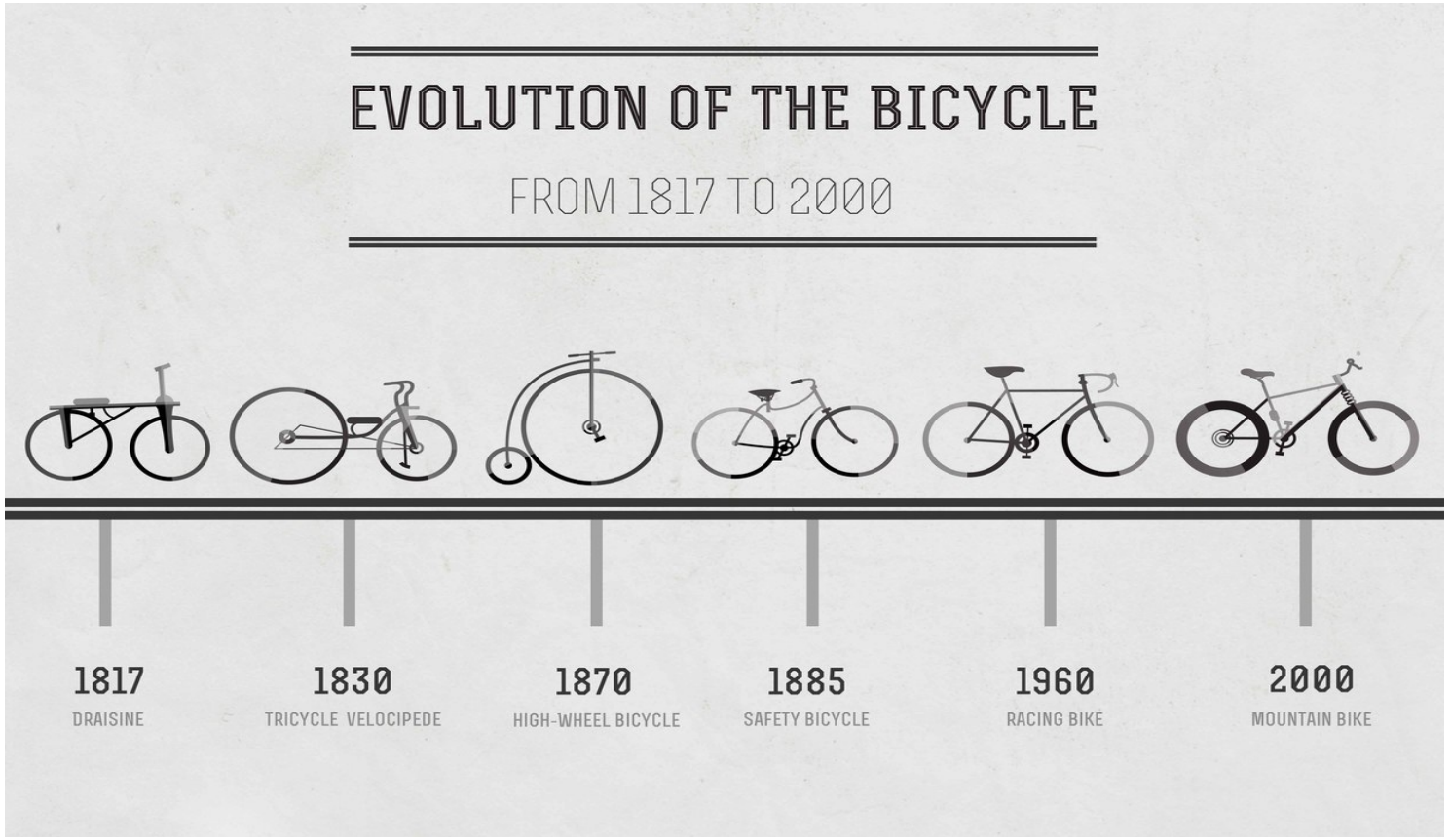
The Genetic Bike!



Group 4B.
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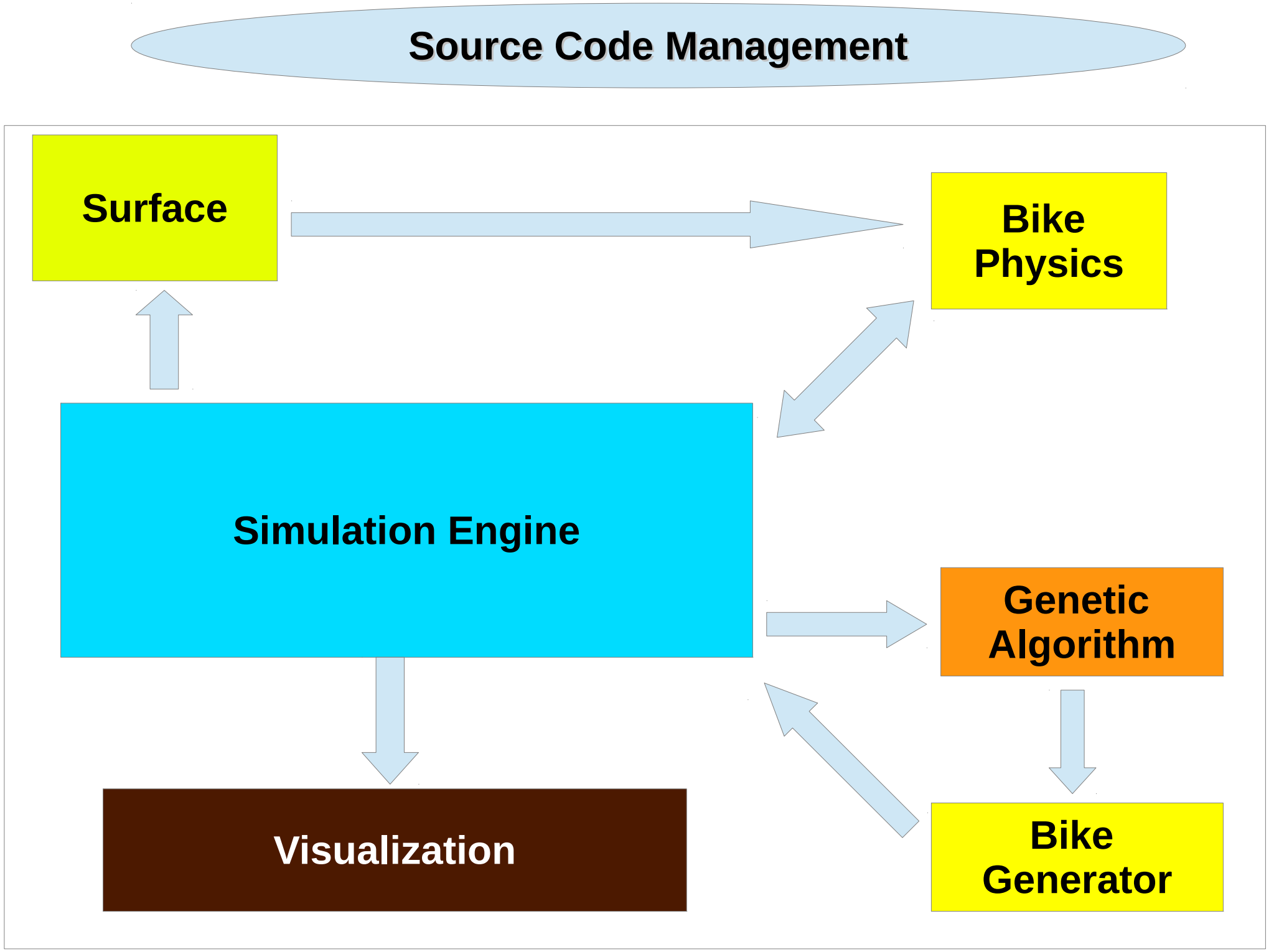
Overall Objective

Generate an 'optimal' bike design using the genetic algorithm

Sub-tasks

- Model 'realistic' bike physics
- Generate random inital bike populations
- Implementation of the genetic algorithm
- Visualization of the simulation
- Managing the development tasks (the collaborative experience)


Source Code Management
Surface
Bike Physics
Simulation Engine
Genetic Algorithm
Visualization
Bike Generator

Source Code Management

- Github
- Trello for keeping track of subtasks
- Regular team meetings to revisit targets and introspect the progress

What Worked

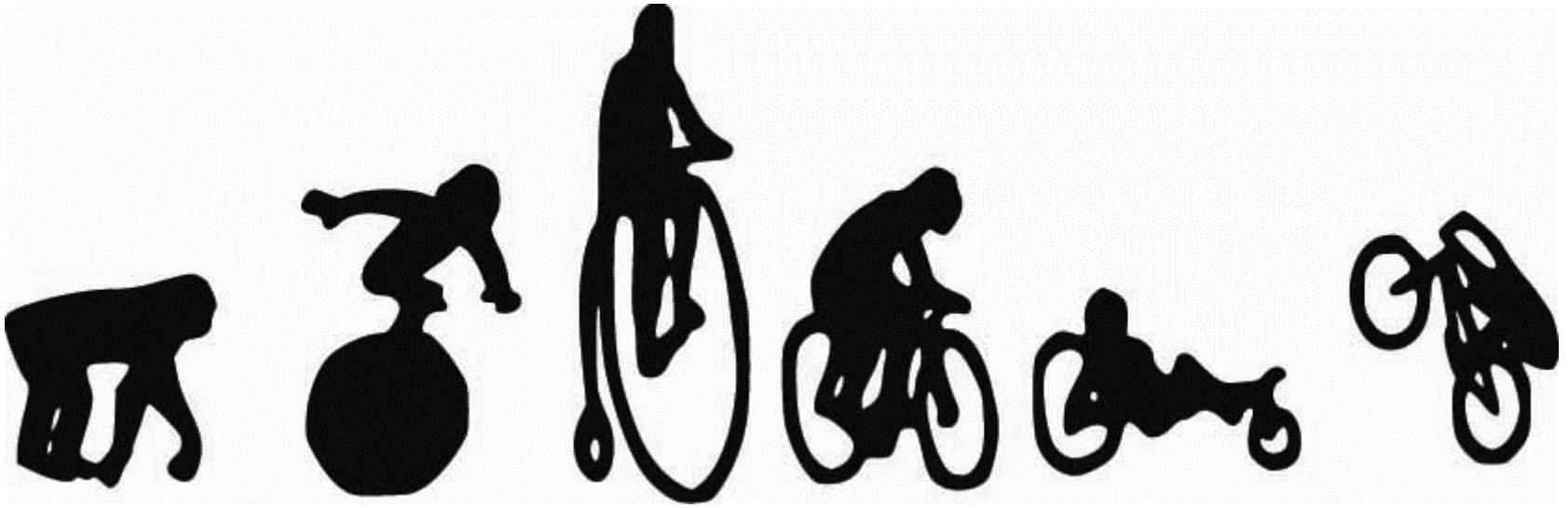
- Effective communication and task assignment during meetings
- Modular approach allowed testing of modules independantly
- Use of github

Problems faced

- Deciding upon the bicycle physics computationally simple yet realistic enough to assist the evolution of an optimal bike
- Understanding the functionality of each others' modules
- Managing to thread the individual modules together

Lessons learnt

- Managing a team project without source code management software is not feasible!
- Developing a software as a part of a team is a skill and harder work than it is credited for!
- Splitting a task into various modules and testing them independantly can assist debugging



Thank You!