ITBA BHT
Coil Project Summer 24
Kickoff Meeting

30 May 2024

Professor Nicolás Magliola / Professor Dr.-Ing. Marcus Purat

BHT Berliner Hochschule für Technik

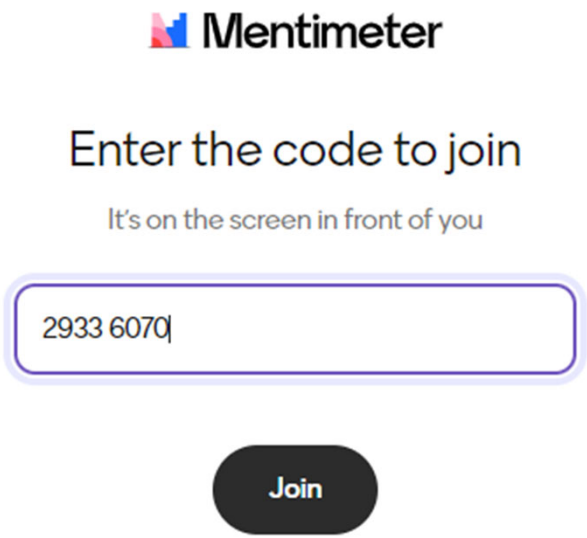
Studiere Zukunft

Coil kickoff meeting – ITBA / BHT

- Introduction
- ICE breaker
- Students introduction
- Team building
- Project introduction
  - Project description and requirements
  - Project timeline
- Closing

ICE breaker

Go to https://www.menti.com/
Enter code 2933 6070



or use menti app on smartphone (if available) with the same code
or scan QR code

Students introduction

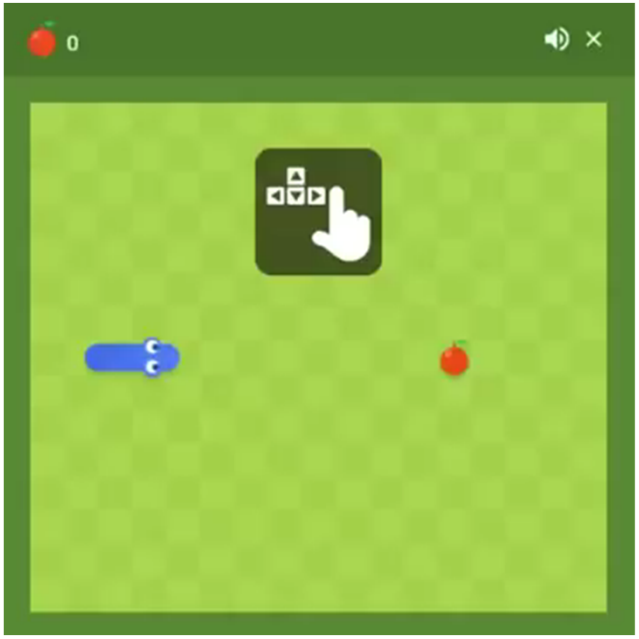
Tell us briefly:

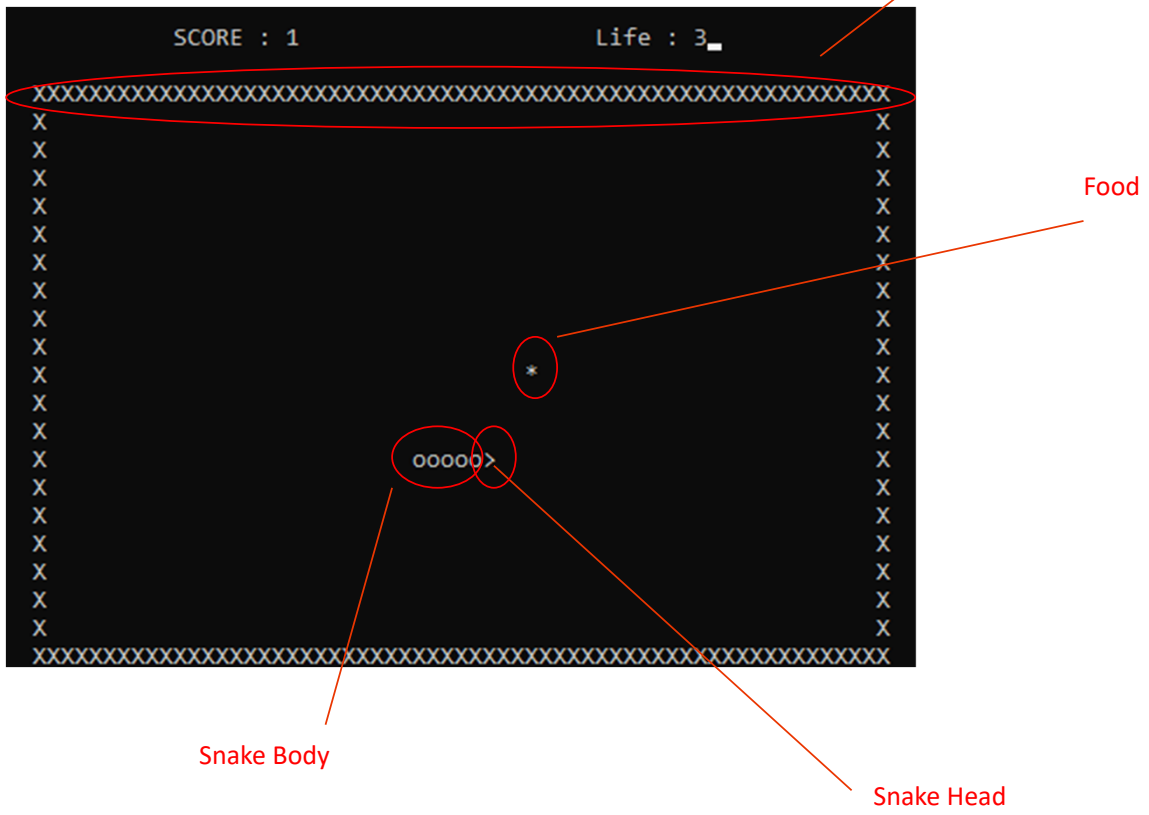
- Your name
- Your age
- One personal item (hobby, city of birth, favourite dish, …)
- …

Team building

- Any teams within each University?
- Any partners from other University found already based on profiles?
- For all others:
  - Check again profiles
  - Make your selection (contact partners via ITBA campus system) by June 6
  - Let us know!
- Remaining students will be randomly assigned a team by us

Coarse Project Description





Mandatory Software Requirements (for passing)

Game:

- **Movement**: Snake moves in 4 directions, maintains direction until a key is pressed.
- **Collision**: Snake detects collision against walls and itself.
- **Food**: Random food position for initial food and each new food.
- **Growth**: Snake grows each time it eats food.
- **Life**: 3 lifes, i.e. game over after 3 deaths, life is displayed all the time
- **Game Score**: Based on played time and snake's length. Score = No of food eaten, score must be displayed all the time.
- **Username**: Username to be entered at the beginning of the game.
- **History Log**: Score and username is saved in file (with fixed filename) at Game Over to save history of all games.
- **Startup**: Fixed initial snake length, snake position, direction.
- **Snake Look**: Select your preferred symbols for head, food, body
- **Keyboard**: Select your preferred keys for movement and escape, consider keyboard design in ARG / GER.

Software Development:

- **Objects**: Walls, food and snake information are stored, not the entire game board.
- **Multifile:** Front-end and back-end separation, all game rules (logics) and HMI functions must be in separate independent modules.
- **Structure**: Usage of at least one struct.
- **Constants**: Usage of `#defines` for constant values (no “magic” numbers in code for initialization or the like).
- **Comments**: Code must be commented.
- **In-Out Arguments**: Usage of function parameters, no usage of global variables.

Optional Software Requirements (to improve grade)

Game:

- **Menu**: Be able to pause, resume or restart game. After loosing it is possible to start playing again without exit the program.
- **Top Score**: Sorted list of best scores (TOP 5 or TOP 10) saved even after closing the game (using files).
- **Configurable Walls**: with/without walls. Without walls means cyclic board, snake leaves board on the left and returns from the right, for instance.
- **Food Expiration:** with/without timeout, change position after some time.
- **Alive Food**: food moves away from snake (much slower than snake speed).
- **Configurable Board**: Configurable board size (on runtime).
- **Configurable Speed**: different speeds for snake and food expiration.
- **Configurable Snake Length**: Initial snake length can be configured.
- **Random Position**: Random initial food position and snake position and direction.
- **Advanced Score**: Modified score calculation = sum(time for a certain length * length).
- **Advanced Snake Look**: Head and tail turns into direction of movement (changing character required).
- **Multiple Platform**: Front-End must work in both Windows and Linux OS (after compiling), using preprocessor conditional compilation for platform-dependent functions only.
- **Animations**: An animation (sliding text, motion graphics, etc.) must be displayed at the begin and after Game Over (at least).

Each feature will be assigned points
There will be a University specific points-grade mapping (rubric)

Feature list subject to be extended

Project Timeline and Deliveries

30.05.24	Kickoff Meeting (Get to know, Project Introduction, Project Organisation)
	Build Teams (communicate, learn about yourselves, drink a virtual beer)
14.06.24	Definition of Project Schedule (Mx, Working Methods (IDE, Communication, Repository), other Group Agreements -> Report to coaches using the ITBA Campus System (CS)
M1	Project Structure / Function Split with Responsibilities -> Report to coaches (CS)
M2.x	Successive Code Deliveries (Repository, depending on schedule)
M3	Project Complete (“First Game”) -> Final program delivery (CS)
M4	Project Presentation as Video (achievements, structure, demo; 10-15 min), all persons in video
xx.09.24	date tbd, Kickout Meeting (Lessons Learned, feedback from all teams and coaches on the coil project, did it meet expectations, how was experience)

Closing

Any questions?

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