Programming Assignment 3 - Part I

Solution of the Forest management example and study of optimal policies

- Download and install MDP Toolbox (https://github.com/sawcordwell/pymdptoolbox)
- Read the documentation and understand the forest management example (from the example submodule)
- Consider a forest where the maximum age is 10
    - Write down the state space and action space for the forest management example
    - Write down or describe the state transition probabilities
    - What is the reward function
- Using the mdptoolbox obtain the optimal policy for managing the forest
- Study the optimal policy as a function of the probability of fire p - comment on how the optimal policy changes as p increases (from near 0 to near 1)
- Study the optimal policy as a function of the discount factor γ - comment on how the optimal policy changes as γ increases (from near 0 to near 1)
- For this assignment you have to submit a Jupyter notebook containing the required answers (can be writted in Markdown cells). The study of the optimal policy can be illustrated via figures (say using matplotlib) or by descriptive text (again using Markdown cells). The submission file should have the format "[SCCODE]_[NAME]_PA31.ipynb" (where you have to insert your SCCODE and NAME).