CSP Solver
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This Python script is designed to solve Constraint Satisfaction Problems (CSPs) using backtracking search with forward checking.

Prerequisites
- Python 3.x installed on your system

2. Navigate to the Directory:

3. Run the Script:
   - Execute the script using the following command format:

   python main.py <var_file> <con_file> <fc_option>

Make sure to include the relevant data in the var file and con file before running

   - Replace <var_file> with the path to your variable file.
   - Replace <con_file> with the path to your constraint file.
   - Replace <fc_option> with `none` or `fc` depending on whether you want to use forward checking.

   For example:

python main.py ex1.var ex1.con fc
python main.py ex1.var ex1.con none

4. View Output:
   - The script will execute and provide the output in the terminal window.
   - If a solution is found, it will be displayed. If not, a message indicating no solution will be shown.

Arguments
- <var_file>: Path to the file containing variables and their domains.
- <con_file>: Path to the file containing constraints.
- <fc_option>: Use `none` for no forward checking, or `fc` to enable forward checking.

Example Files
- Example variable files (`.var`) and constraint files (`.con`) are provided in the report.

Note

- Ensure that the variable file and constraint file are in the same directory as the script or provide the correct paths when running the script.

If you encounter any issues or have questions, please feel free to reach out to the author.