|  |
| --- |
| # Name of the project |
|  |

|  |
| --- |
| PROJECT\_NAME = function |
|  |

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| --- |
| # Output directory |
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|  |
| --- |
| BUILD = build |
|  |

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| --- |
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| --- |
| # All source code files |
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|  |
| --- |
| SRC = main.c\ |
|  |

|  |
| --- |
| src/function.c\ |
|  |

|  |
| --- |
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| --- |
| # All test source files |
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| --- |
| TEST\_SRC = src/function.c\ |
|  |

|  |
| --- |
| test/test\_function.c\ |
|  |

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|  |
| --- |
| TEST\_OUTPUT = $(BUILD)/Test\_$(PROJECT\_NAME).out |
|  |

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| --- |
| # All include folders with header files |
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|  |
| --- |
| INC = -Iinc |
|  |

|  |
| --- |
|  |
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|  |
| --- |
| PROJECT\_OUTPUT = $(BUILD)/$(PROJECT\_NAME).out |
|  |

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| --- |
| # Document files |
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| --- |
| DOCUMENTATION\_OUTPUT = documentation/html |
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| --- |
| # Default target built |
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| --- |
| $(PROJECT\_NAME):all |
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| --- |
| # Run the target even if the matching name exists |
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| --- |
| .PHONY: run clean test doc all |
|  |

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| --- |
| all: $(SRC) $(BUILD) |
|  |

|  |
| --- |
| gcc $(SRC) $(INC) -o $(PROJECT\_OUTPUT).out -lm |
|  |

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| --- |
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| --- |
| # Call `make run` to run the application |
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|  |
| --- |
| run:$(PROJECT\_NAME) |
|  |

|  |
| --- |
| ./$(PROJECT\_OUTPUT).out |
|  |

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| --- |
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|  |
| --- |
| # Document the code using Doxygen |
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| --- |
| doc: |
|  |

|  |
| --- |
| make -C ./documentation |
|  |

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| --- |
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| --- |
| # Build and run the unit tests |
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|  |
| --- |
| test:$(BUILD) |
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|  |
| --- |
| gcc $(TEST\_SRC) $(INC) -o $(TEST\_OUTPUT) -lcunit -lm |
|  |

|  |
| --- |
| ./$(TEST\_OUTPUT) |
|  |

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| --- |
| # Remove all the built files, invoke by `make clean` |
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| --- |
| clean: |
|  |

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| --- |
| rm -rf $(BUILD) $(DOCUMENTATION\_OUTPUT) |
|  |

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| --- |
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|  |
| --- |
| # Create new build folder if not present |
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|  |
| --- |
| $(BUILD): |
|  |

mkdir build