

Modification to Main.py



To gather a non-trivial amount of performance statistics, it was important that the bot played a minimum of 150 matches on a total of 15 maps. This was achieved through modification of the `main()` function from `main.py`

The function was modified with a simple loop to allow the Excel Logger class to be called each time a game window closed. This allowed for settings modification during runtime which meant the logger could record multiple games on multiple maps within a single run.

```
585 if __name__ == "__main__":
586     # Supplied map sizes were generated for (500, 500) size
587     # Scale the visual size with this
588     screen_size_scale = 2
589     current_map = 10
590     current_match = 100
591     matches_per_map = 10
592     max_matches = 150
593
594     first_map = True
595     excel_logger = ExcelLogger(
596         "PlanetWars4", f"Win Data Matches {current_match} - {max_matches - 1}"
597     )
598
599     while current_match < max_matches:
600         if current_match % matches_per_map == 0 and not first_map:
601             current_map += 1
602
603         map_file = f"./maps/map{current_map}.txt"
604
605         settings = {
606             "map_file": map_file,
607             "players": ["FIBD", "Rando"],
608             "max_game_length": 600,
609             "start_paused": False,
610             "game_over_quit": True,
611             "update_target": 60,
612             "background_img": False,
613             "width": int(500 * screen_size_scale),
614             "height": int(500 * screen_size_scale),
615             "vsync": False,
616             "resizable": False,
617         }
618
619         window = PlanetWarsWindow(**settings)
620         app.run()
621         window.game.logger.flush()
622
623         excel_logger.appendWinData(
624             current_match,
625             window.game.winner,
626             [p for p in window.game.players.values() if not p.is_alive()],
627             f"map {current_map}",
628         )
629
630         current_match += 1
631         if first_map:
632             first_map = False
633
```

During runtime, the performance of the program waned relative to the current loop iteration. This would result in an initial `update_rate` of 200Ups being capped at 5Ups not 10 matches later. This bug has never resulted in a program crash and such the cause remains unknown.