

Question 4

Adhering to the SOLID principles of software development, the following areas could be improved:

- For the functions `update_department()` and `update_status()`, the naming of the objects is confusing and may create data duplication. To update the values of the object, either the original object names should be used (e.g. `department` and `is_active`) or a new class can be created with the ability to update object values in certain contexts by overriding the original values. In either case, the original object names should still be used.
- For the `remove_employee` function, the `self.department` and `self.active_status` attributes are missing. This could result in undesirable retention of data including IDs and names. These should be added to the function.
- For the `print_employee_report()` function, the name of the function should be made more clear, as the function itself writes employee information to a file but does not export a file unique to the employee, nor does it print a file unique to the employee. There is no unique path in this code for a file relating to an individual employee so either the function needs to be named something more appropriately descriptive or the code itself must be amended.