

CMPE 202 Individual project
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Part 2:

The design patterns we can use for differentiating card types and allocating the correct card class would be: Template and Factory

Since all the file formats have a common operation of checking the credit card records, it would create a code smell of duplicate code to write the same piece of code for all 3 file formats. We can move the function to an abstract class and implement template method by creating the other two functions for reading the file and writing the output to a file specific to the file format.

Also using factory pattern will make the code extensible to multiple file formats and avoid if-else and switch loops everytime we need to determine the file format. We can implement that in factory class and use the factory class to create file format objects.

Diagram:

<https://drive.google.com/file/d/1GbcL4CoFbJg7CYD9VxvIt41UJxMRwaff/view?usp=sharing>

<https://github.com/gopinathsjsu/individual-project-SayaliVB/blob/main/Class%20Diagram%20part%202.png>