



File IO

Serializing and Deserializing



Serializing

Serializing

- **Serializing** is the process of storing object instances to a file or stream.
- It stores the state of the object (the data of the objects are saved).

Objects



Serializing

- Given an object, we take the values of the data members and write them to a file/stream.

```
class Car
{
private:
    int mModelYear;
    std::string mModel;
    std::string mMake;
public:
    void serialize(std::ofstream& outFile, char delimiter)
    {
        outFile << mModelYear << delimiter << mMake << delimiter << mModel;
    }
}
```



Deserializing

Deserializing

- **Deserializing** is the process of reading the object state and recreating the object.

Objects



Deserializing

- Given a csv string, we parse the csv data to get the values for the data members.

```
void deserialize(std::string csvData, char delimiter)
{
    //data format: year make model
    std::string outStr;
    std::stringstream sPart(csvData);
    std::getline(sPart, outStr, delimiter);
    mModelYear = std::stoi(outStr); //converts string to int
    std::getline(sPart, mMake, delimiter);
    std::getline(sPart, mModel, delimiter);
}
```



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