# Enrollment Application Problem Definition

## Summary

Create an application to process enrollments. The application should be console application written in C#. The application will serve as the intake mechanism for a flat comma delimited input file. The applications main functions are to scan the file, validate the contents, and determine the final disposition of the enrollment.

Technology: Console application written in C#

Delivery Mechanism: Email solution in a zip file or as a link to GitHub repository to [sbird@hsabank.com](mailto:sbird@hsabank.com)

## Purpose

While the problem may seem somewhat simplistic, the purpose is not to produce a production application. We are attempting to give you the opportunity to show us your thought processes and your coding style. Your code will be judged on:

* Application Structure
* Clearly named classes and functions
* Demonstration of Object-Oriented concepts (Demonstrate as many of these as you can, but don’t get bogged down trying to hit every mark, good clean code is the key):
  + Encapsulation
  + Abstraction
  + Inheritance
  + Polymorphism

## Requirements

1. Read a flat enrollment file into memory
   1. The file will be a comma delimited format
   2. The file detail record will have the following fields: FristName,LastName,DOB,PlanType,EffectiveDate
   3. There is no header record
   4. There is no footer record
2. Validate the incoming enrollment record according to the following rules
   1. All fields are required
   2. DOB (Date of Birth) is required
   3. DOB should be in the format mmddyyyy and must represent a valid date
   4. PlanType has the follow allowed set of values (HSA, HRA, FSA)
   5. EffectiveDate should be in the format mmddyyyy and must represent a valid date
3. If any of the rules in item 2 fail validation then the file should be considered invalid and processing should stop
4. Additional Buisness Rules
   1. An individual must be at least 18 years of age to enroll
   2. The plan Effective Date may not be more than 30 days in the future
5. If either of the rules in item 4 do not match then the record can be stored with a Status of "Rejected"
6. Records that pass the business rules should be stored with a status of "Accepted"

\*NOTE: "Stored" simply means in some kind of in memory collection.

## Acceptance Criteria

1. When a detail record fails validation and processing is stopped: A message is printed to the console, "A record in the file failed validation. Processing has stopped."

2. If all validation is passed then print each record from the file to the console in the following format:

"Status, FirstName, LastName, DOB (Short Date string), PlanType, EffectiveDate (Short Date string) "