



The case of White House Passes

The presidential residence of United States of America is probably one of the most secure and locked up places in the this Earth. That does not mean that the visitors are allowed. Indeed, there is a separate section of the office in the White House which handles all sorts of visitors' passes. And not only visitors' passes, but also passes related to scheduled and unscheduled maintenance and any such requirement. Even the pizza delivery man has to obtain a pass!

The processes involved in obtaining a pass are numerous and complex in nature. But, 20 years back, the people working for the president decided that time has come for the white house to have a more automated system of accepting the application of these passes, processing them and then issuing them. As such, consider yourself going back in time, to the point where the people of white house were detailing their pass processing steps. For simplicity and security, the information presented here is for processing of the lowest level security passes (the ones reserved for toilet cleaners in the ground floor and children accompanied by their adults to visit the White House!!).

The officer in charge of processing the passes has a desk where the applications (having background checked for security) are organized. She picks up the applications, one at a time, and then checks through the databases (computer databases) that whether the person has already applied for a pass before or not. Since applying for a pass requires a lot of details to be submitted and a thorough background check, the details of the applications which are issued passes are recorded in a database. If the person does not exist, then a new database entry in that person's name is created. And, based on the results from the security check, the pass is either sent for issuing, or a rejection decision is sent to the applicant. If the person does exist, then the officer checks whether the person made an application within 7 days' time? There is a rule that only one application per week can be made. If the application has been before within past 7 days, a rejection decision is issued to the applicant. If the application is made after a week of making the previous application, then the officer checks whether the previous pass issued has been returned or not. In not returned, then the applicant is given a days' time to return the previous pass and pay a fine. If the pass has been returned, then the officer cross matches the previous details with the existing details. If all the details match, it is recorder in the database that another pass is being issued in this person's name. And the application is approved and passed through for issuing of the pass.

Given this existing procedure, you have been given the task of:

- 1) Develop a simplistic process mad for this pass processing
- 2) Look for any redundant activity, and
- 3) If a fully automated system is implemented, which of these steps can be automated?

So Good Luck and Godspeed.