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CSSE3002 – The Software Process

Requirements Specification

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Introduction

This document provides the requirement specification for an eVisa processing system. This is designed to streamline the application and approval process for foreign citizens seeking to enter Australia.

Use Case Packages

Package Diagram

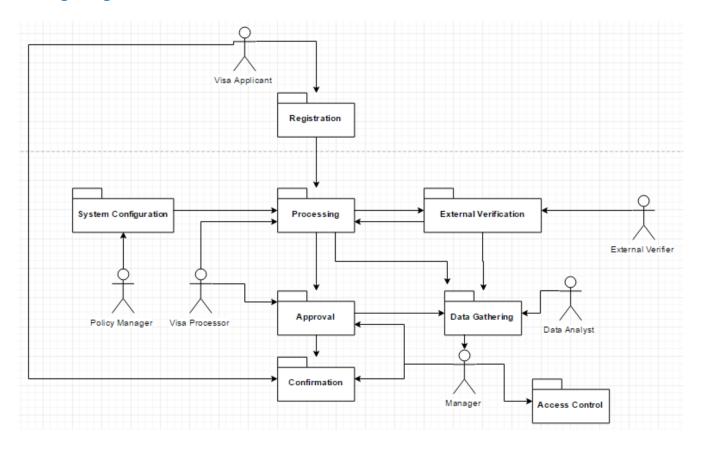


Figure 1: Package Diagram

Package Descriptions

Package Name	Description
Access Control	Create and manage users and assign access privileges
Registration	Give personal information to begin application
Approval	The decision of whether or not to grant a visa is made
Confirmation	The applicant is notified whether or not their application was successful
Data Gathering	View statistics on the behaviour of employees. Allows for more complex data operations
External Verification	External verifiers may make comments on an application
System Configuration	Policy rules are updated (e.g. updating a black list etc)

Processing

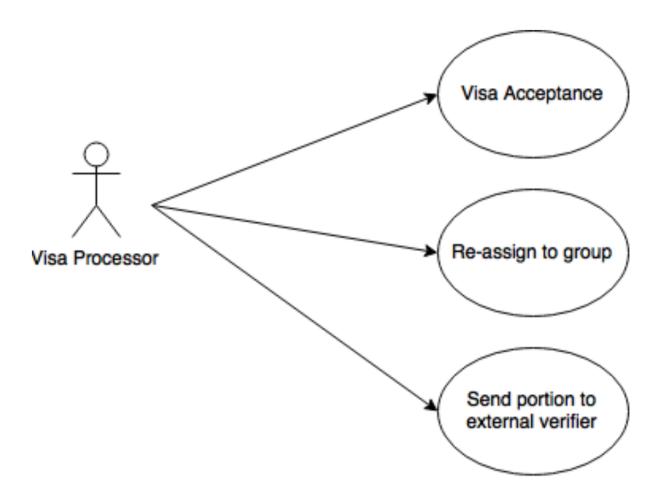


Figure 2: Processing

External Verification

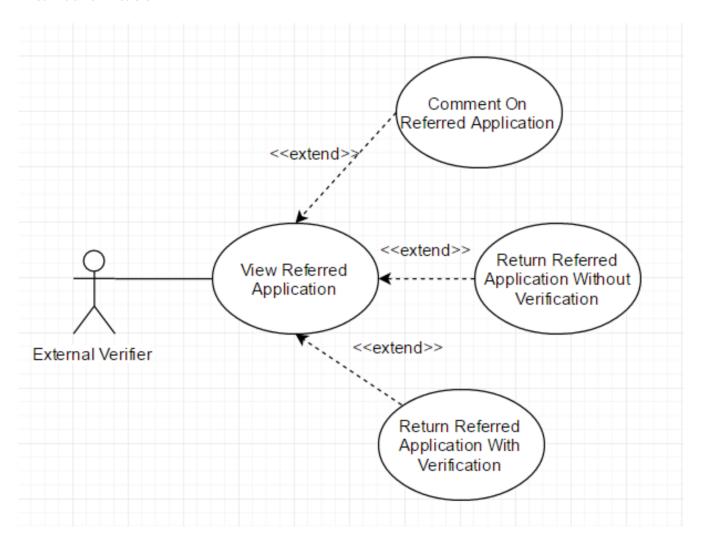


Figure 3: External Verification

System Configuration

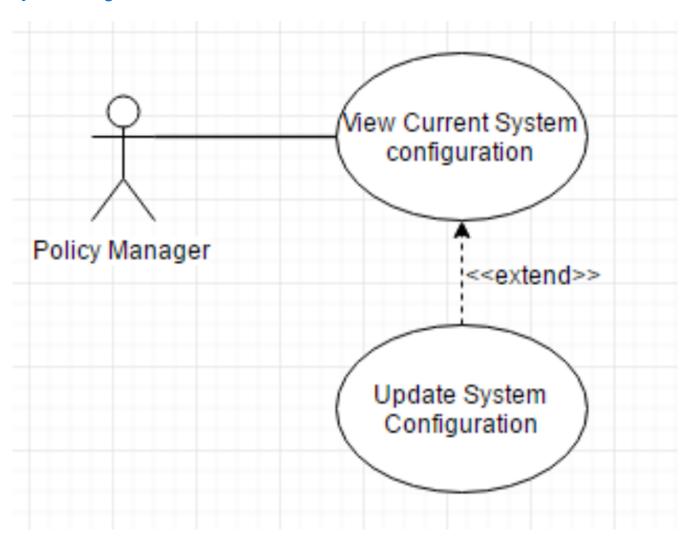


Figure 4: System Configuration

Registration

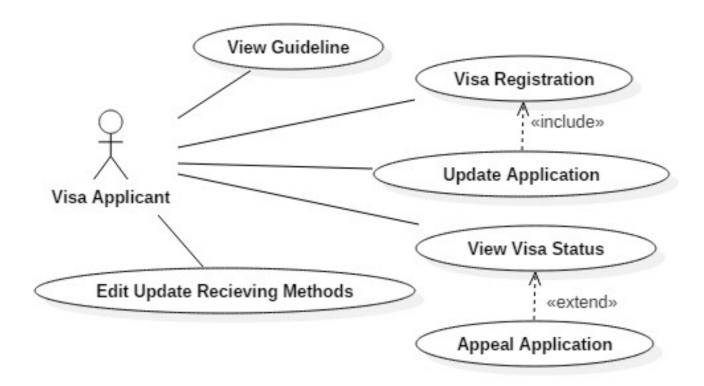


Figure 5: Registration

Access Control

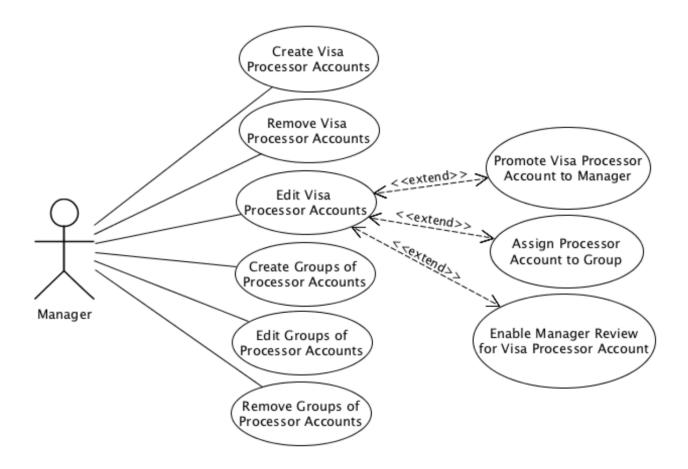


Figure 6: Access Control

Data Gathering

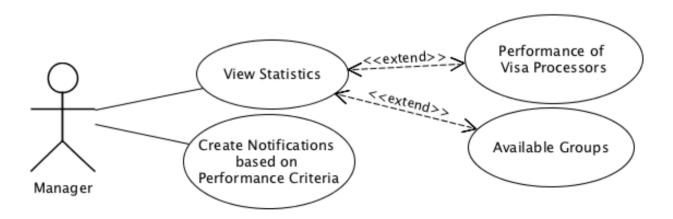


Figure 7: Data Gathering

Approval

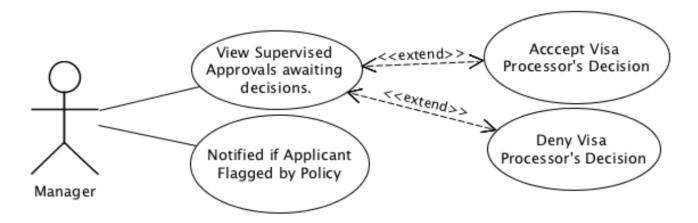


Figure 8: Approval

Actor Descriptions _____

Actor Name	Description
Visa Processor	Less common user but more frequent and with higher permissions. These
	users will be reviewing data entered by the Visa Applicant users and
	approve/deny visas.
External Verifier	Users who are not responsible for processing applications, nor under the
	responsibility of a Manager, but have can have significant information
	influencing a Visa ProcessorâĂŹs decision. A Visa Processor can refer an
	application to an External Verifier to receive a recommendation. Examples of
	External Verifiers are members of the AFP or FBI, medical doctors responsible
	for examinations, or an employer verifying that the applicant is an employee.
Manager	Manages a group of Visa Processors by creating Visa Processor accounts with
	necessary restrictions and monitors processor actions and performance.
Policy Manager	Rare users, responsible for updating system configuration to reflect changes
	in visa policy. E.g. introducing a new type of visa, changing the list of
	countries that automatically require extra attention.
Visa Applicant	The person who apply visa through the system

Use Case Summaries ________

External Verification

Use Case	Summary
Vias Acceptance	Allows the user to accept or deny a visa application. The user is also able to write notes or comments and attention them to the application
Re-assign to Group	Allows the user to forward a visa application onto another group, in case the user is not qualified or unsure to complete the visa application process
Send portion to external verifier	Gives the user the ability to select different areas of the visa application and forward the detail to an external source, such as the FBI or other organisations

External Verification

Use Case	Summary
View referred application	As an external verifier, I can view the parts of an application that have been referred to me
Comment on referred application	As an external verifier, I can add comments and supporting evidence on an application that has been referred to me
Return referred application that cannot be verified	As an external verifier, I can return the application to the referrer if I believe I cannot verify it for whatever reason.
Return referred application has been verified	As an external verifier, I can return the application to the referrer once I have verified it.

System Configuration

Use Case	Summary
View current system configuration	As a policy manager, I can view all current policy rules
Update system configuration	As a policy manager, I can update a policy rule

Registration

Use Case	Sumary
View Guideline	To view the guideline on which visa to apply and how to apply
Visa Registration	Application for applicant to fill up for registering a visa
Update Application	Allow applicant to modify application detail
View Visa Status	Allow applicant to view status and details of the visa applied
Appeal Application	Appeal application to be review again for denied visa applicant
Edit Updates Receiving Method	Modify option of receiving visa related updates

Access Control

Use Case	Summary
Create Visa Processor Account	Allows the manager to create an account for a new Visa Processor
Remove Visa Processor Account	Allows the manager to remove an account for a new Visa Processor

Use Case	Summary
Edit Visa Processor Account Permissions	A Manager should be able to change the permissions of individual Visa Processors
Create Groups of Visa Processors	A Manager can create groups for Visa Processor accounts based on specializations
Assign Processor Accounts to Groups	A Manager can add and remove Visa Processor accounts from the groups. A single Visa Processor account can be within multiple groups

Data Gathering

Use Case	Summary
View Processor Statistics Create Notification Conditions for Processor Accounts	Managers can view the statistics of groups or individual Visa Processor accounts Allows the Manager to create certain conditions for individual Visa Processor accounts which, if met, will send a notification to that manager

Approval

Use Case	Summary
Enable Review Requirement	Managers can enable an individual Visa Processor account's decisions to be
for a Processor Account	reviewed. This can be used for new Processor employees
Promote Processor Account	A Manager can promote a Visa Processor account to Manager Level. Once
to Manager	conducted, a demotion can only be conducted by system administrators

Use Case Descriptions

Visa Acceptance

Version0.1Date1/4/17PackageApproval

Summary Allows the user to accept or deny a visa application. The user is also able to write

notes or comments and attention them to the application

Primary Actor Visa Applicant **Secondary** Visa Processor

Actor Inherits Includes Extension Points

Business Rules Estimate

Pre-Condition(s)

Author Daniel Fitzmaurice

Typical Sequence of Events

Actor Stimulus	System Response
Request for Visa Application Document	2. Provides a document ready for viewing
3. User can accept/deny application or take further action	4. Visa application is sent elsewhere to be dealt with

Alternative Sequences of Events

Table 10: Alternative 1 – Re-assign Visa at step 3

Actor Stimulus	System Response
3. User Reassigns application to a different group	4. Visa Application is sent to the other group and a person from within that group will accept or deny the application

Re-assign to Group

Version: 0.1	Date: 2/4/17
Package	Processing
Summary	Allows the user to forward a visa application onto another group, in case the user is not qualified or unsure to complete the visa application process
Primary	Visa Processor
Actor	
Secondary	
Actor	
Inherits	Visa Acceptance
Includes	
Extension	
Points	
Business	
Rules	
Estimate	
Pre-Condition	n(s)
Author	Daniel Fitzmaurice

Typical Sequence of Events

Actor Stimulus	System Response	
User submits request for another group to review	2. User moves application to another group	

Table 13: Alternative 1 – The network transmission fails at step 1

Actor Stimulus	System Response
	2.1 The user receives an error message
	2.2 No data is changed

Send portion to external verifier

Version: 0.1	Date: 2/4/17
Package	External Verification
Summary	Gives the user the ability to select different areas of the visa application and forward the detail to an external source, such as the FBI or other organisations
Primary	Visa Processor
Actor	
Secondary	External Verifier
Actor	
Inherits	
Includes	Provide external verification
Extension	
Points	
Business	
Rules	
Estimate	
Pre-Conditio	n(s)
Author	Daniel Fitzmaurice

Typical Sequence of Events

Actor Stimulus	System Response
1. User selects data to be	2. Packages the information into an exportable format and sends the information
forwarded	to an external source

View referred application

Version: Initial Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can view parts of an application that have been referred to me
Primary Actor	External Verifier
Secondary Actors Inherits Includes	Visa Processor
Extension Points Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-conditions(s)	T
Post-Condition(s) Priority	The application has been referred to an external verifier Must Have

Typical Sequence of Events

Actor Stimulus	System Response
Select the view option for a referred application	2. The referred portion is
	displayed

Table 18: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Table 19: Alternative 2 – The application has already been approved/denied at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Comment on referred application

Version: Initial Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can add comments and supporting evidence on an application that has been referred to me
Primary Actor	External Verifier
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension Points	
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-Condition(s)	The application has been viewed by the external verifier
Post-Condition(s)	Any comments made are stored with the application
Priority	Must Have

Typical Sequences of Events

Actor Stimulus	System Response
1. Enter comments and provide supporting	2. The comments and documents are stored with the
documentation	application

Table 22: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Table 23: Alternative 2 – The application has already been approved/denied

Actor Stimulus	System Response	
	2.1 An error message is shown	
	2.2 The external verifier can no longer see the application	

Return referred application that cannot be verified

Version: Initial	
Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can return the application to the referrer if I believe I cannot verify it
	for whatever reason
Primary Actor	External Verifier
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension Points	
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-Condition(s)	The application has been referred to an external verifier, and the external verifier believes they cannot provide verification
Post-Condition(s) Priority	The application has not been reviewed by an external source Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. The verifier selects the cannot verify option on the application	6.1 The application can no longer be seen by the external verifier
	6.2 The Visa Processor who referred the application is notified that the application is unverified

Table 26: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Table 27: Alternative 2 – The application has already been approved/denied at step 1

Actor Stimulus	System Response	
	2.1 An error message is shown	
	2.2 The external verifier can no longer see the application	

Return referred application that has been verified

Version: Initial	
Version	Date: 2/4/17
Package	External Verification
Summary	As an external verifier, I can return the application to the referrer once I have verified it
Primary Actor	External Verifier
Secondary Actor	Visa Processor
Inherits	
Includes	
Extension Points	
Business Rules	External verifiers can see and comment on only the portion of the application that has been referred to them
Estimate	
Pre-Condition(s)	The application has been referred to an external verifier, and this verifier has provided comments and or supporting documentation
Post-Condition(s)	The application has been reviewed by an external source
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
5. Select the return option for a referred application	6.1 The application can no longer be seen by the external verifier
	6.2 The Visa Processor who referred the application can proceed with processing

Table 30: Alternative 1 – The external verifier has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown
	2.2 The external verifier can no longer see the application

Table 31: Alternative 2 – The application has already been approved/denied

Actor Stimulus	System Response	
	2.1 An error message is shown	
	2.2 The external verifier can no longer see the application	

View current system configuration

Version: Initial Version	Date: 2/4/17
Package	System Configuration
Summary	As a policy manager, I can view all current policy rules
Primary Actor	Policy Manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	
Post-Condition(s)	No changes to configuration have occurred
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Select the view policy rules option	2. A list of all current policies is displayed

Table 34: Alternative 1 – The policy manager has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown

Table 35: Alternative 2 – A concurrent modification has occurred at step 1

Actor Stimulus	System Response
	2.1 A notification is shown
	2.2 The displayed data is updated

Update policy rules

Version: Initial Version	Date: 2/4/17
Package	System Configuration
Summary	As a policy manager, I can update the policy rule
Primary Actor	Policy manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The policy manager is viewing the list of policy rules
Post-Condition(s) Priority	The selected policy rule is changed system wide, no other data changes occur Must Have

Typical Sequence of Events

Actor Stimulus	System Response
1. Select an individual rule	2. The rule becomes editable
3. Enter new value	4. The new value is displayed
5. Submit	6. The rule is changed system-wide

Table 38: Alternative 1 – The policy manager has their access revoked at step 1

Actor Stimulus	System Response
	2.1 An error message is shown

Table 39: Alternative 2 – A concurrent modification has occurred

Actor Stimulus	System Response
	2.1 A notification is shown
	2.2 The displayed data is updated

Registration - View Guideline

Version: Initial Version	Date: 2/4/17
Package	View Guideline
Summary	View the guideline on which visa to apply and how to apply
Primary Actor	Visa Applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	Guideline needed to exist to be view
Post-Condition(s)	The guideline information is provided to be the Visa Applicant
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant want to view guideline	2. Display available guidelines

Registration – Visa Registration

Version: Initial Version	Date: 2/4/17
Package	Registration
Summary	Register visa through application
Primary Actor	Visa applicant
Secondary Actor	
Inherits	
Includes	< <update application="">></update>
Extension Points	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system.
Post-Condition(s)	The Visa Applicants completed the application and successfully registered for the visa
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Reponse
1. Visa Applicant want to register visa	2.1 System create and display the visa application2.2 System record applicant input and upload (extension point: Update Application)2.3 Update and submit visa application

Actor Stimulus	System Response	
	2.1 Update all input and upload before it's closed	
	2.2 Application is not yet submitted	

Registration – Update Application

Version: Initial Version	Date: 2/4/17
Package	Registration
Summary	Allow applicant to modify application detail
Primary Actor	Visa applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system. The Visa Applicants have an existing application
Post-Condition(s)	Visa Application is updated
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response
1. Visa Applicant want to update personal detail	2.1 Retrieve and display applicant's existing application2.2 Record applicant input and upload
	2.3 Update and submit visa application

Table 47: Alternative 1 – Visa Applicant do not update personal detail at step 1

Actor Stimulus	System Response	
	2. Applicant recorded personal details remain same as before	

Table 48: Alternative 2 – Visa Applicant close the system without submitting at step 1

Actor Stimulus	System Response	
	2.1 Update all input and upload before it's closed	
	2.2 Applicationn is not yet submitted	

Registration – View Visa Status

Version: Initial	Poto: 2/4/17	
Version	Date: 2/4/17	
Package	Registration	
Summary	Allow applicant to view status of the visa applied	
Primary Actor	Visa Applicant	
Secondary Actor		
Inherits		
Includes		
Extension Points	< <appeal application="">></appeal>	
Business Rules		
Estimate		
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system. The Visa Applicant's application has been successfully applied in the system	
Post-Condition(s)	The Visa Application status is provided to the Visa Applicant	
Priority	Must Have	
Author	Wei Qing Chin	

Typical Sequence of Events

Actor Stimulus	System Response
Visa Applicant want to view application status	2.1 Check for applicant's visa application status
	2.2 Display applicant's visa application status (extension point: Appeal Application)

Table 51: Alternative 1 – Visa applicant's visa was denied at step 1

Actor Stimulus	System Response	
	2.1 System display "Visa Denied"	
	2.2 System display reason of why visa is denied	

Registration - Appeal Application

Version:	
Initial Version	Date: 2/4/17
Package	Registration
Summary	Appeal application to be reviewed again for denied visa applicant
Primary	Visa applicant
Actor	
Secondary	
Actor	
Inherits	
Includes	
Extension	
Points	
Business	
Rules	
Estimate	
Pre-Condition	(s)The Visa Applicants have been successfully registered in the system. The Visa Applicant's application has been successfully applied in the system. The Visa Applicant's application was reviewed and denied
Post-Condition	n(s) he Visa Application is resubmitted to be appealed

Typical Sequence of Events

Must Have

Wei Qing Chin

Priority

Author

Actor Stimulus	System Response	
Visa Applicant wants the denied visa to be reviewed again	2.1 Check for applicant's visa appeal possibility	
	2.2 Update and submit applicant's application to be appealed2.3 Change application status	

Table 54: Alternative 1 – Visa applicant's application cannot be appealed at step 1

Actor Stimulus	System Response
	2.1 System display why visa cannot be appealed

Registration – Edit Update Recieving Methods

Version: Initial Version	Date: 2/4/17
Package	Registration
Summary	Modify option of receiving visa related updates
Primary Actor	Visa applicant
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The Visa Applicants have been successfully registered in the system
Post-Condition(s)	The Visa Applications choice of receiving update is updated
Priority	Must Have
Author	Wei Qing Chin

Typical Sequence of Events

Actor Stimulus	System Response 2.1 Check for applicant's current option of receiving update	
Visa Applicant wants to change way of receiving the updates		
	2.2 Record applicants input	
	2.3 Update and save applicant input	

Table 57: Alternative 1 – Visa applicant did not choose any way of receiving update

Actor Stimulus	System Response
	2.1 System display warning message
	2.2 System could not proceed until applicant chosen an option

Create Visa Processor Accounts

Version: Initial Version	Date: 2/4/17
Package	Access Control
Summary	Create new uniquely identifiable accounts for Visa Processors
Primary Actor	Manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	
Post-Condition(s)	The account has been created and is accessible by the designated Visa Processor
Priority	Must Have
Author	Mark Belonogoff

Typical Sequence of Events

Actor Stimulus	System Response
1. Click "Create Processor Account" button	2. Opens "new processor account form"
3. Fill out the new processor account form	4. Indicate if required fields have not been filled out
5. Submit "new processor account form"	6.1 Indicates if form was submitted successfully or not
	6.2 Provides information on how new user can access

Alternative Sequences of Events

Table 60: Alternative 1 – System is unable to create an account at step

Actor Stimulus	System Response
3.1 Pr	3.1 Provide error message with reason why account could not be created
	3.2 Provide possible solution method for manager (e.g. Retry, contact system administrator with
	error message)

Remove Visa Processor Accounts

Version: Initial	
Version	Date: 2/4/17
Package	Access Control
Summary	A manager can remove a visa processor account
Primary Actor	Policy Manager
Seconday Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	The Processor account must have been created
Post-Condition(s)	The account has been removed and can no longer be used for the system. All unprocessed
• • • • • • • • • • • • • • • • • • • •	applications associated with the account are designated as "unassigned"
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
Click "delete account" for the particular Processor Account	2. Display a confirmation window
3. Accept confirmation for deletion	4.1 Remove the Processor Account from groups4.2 Unassign all unfinished applications from the account4.3 Display a reponse indicating that the account has been removed

Alternative Sequences of Events

error message)

Table 63: Alternative 1 – The Manager declines the confirmation at step

Actor Stimulus	System Response	
	3.1 Display response indicating that the Processor account was not deleted	
	Table 64: Alternative 2 – The system is unable to remove the account at step 4	
Action Stimulus	System Response	
	4.1 Provide error message with reason why account could not be removed 4.2 Provide possible solution method for manager (e.g. Retry, contact system administrator with	

Edit Visa Processor Accounts

Version: Initial Version	Date: 2/4/17
Package	Access Control
Summary	Edit management options for a Visa Processor account supervised by a manager
Primary Actor	Manager
Secondary Actor	
Inherits	
Includes	
Extension Points	
Business Rules	
Estimate	
Pre-Condition(s)	
Post-Condition(s)	The account has been created and is accessible by the designated Visa Processor
Priority	Must Have

Typical Sequence of Events

Actor Stimulus	System Response
Select Processor account to edit Submit the new options form	2. Provide edit options for account to manager as form4.1 Indicates if form was submitted successfully or not
	4.2 Updates groups to show that options have changed

Alternative Sequences of Events

Table 67: Alternative 1 – The system is unable to remove the account at step 4

Actor Stimulus	System Response
	4.1 Provide error message with reason why account options could not be updated 4.2 Provide possible solution method for manager (e.g. Retry, contact system administrator with error message)

Activity Diagrams	
ricerrity Diagrams	

External Verification

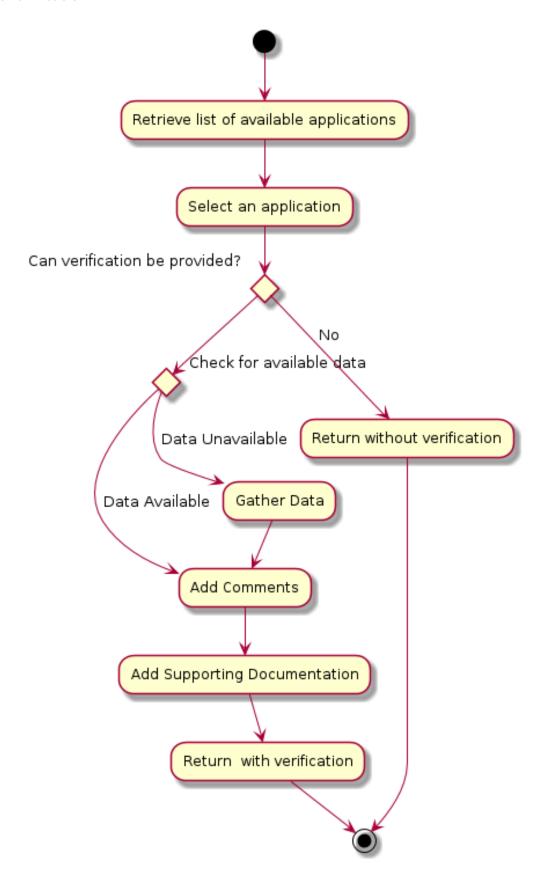


Figure 9: Provide External Verification

Visa Applicant

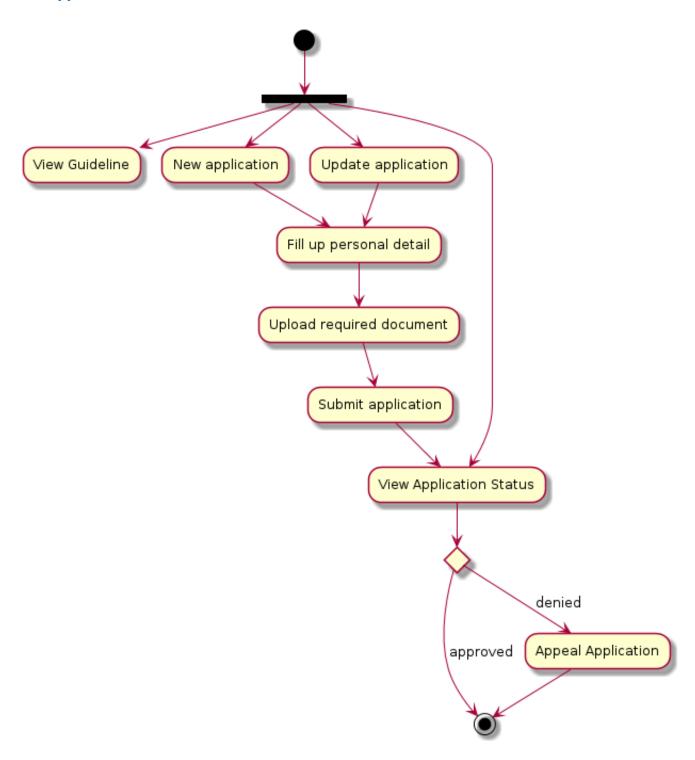


Figure 10: Visa Applicant

Create Visa Processor Account

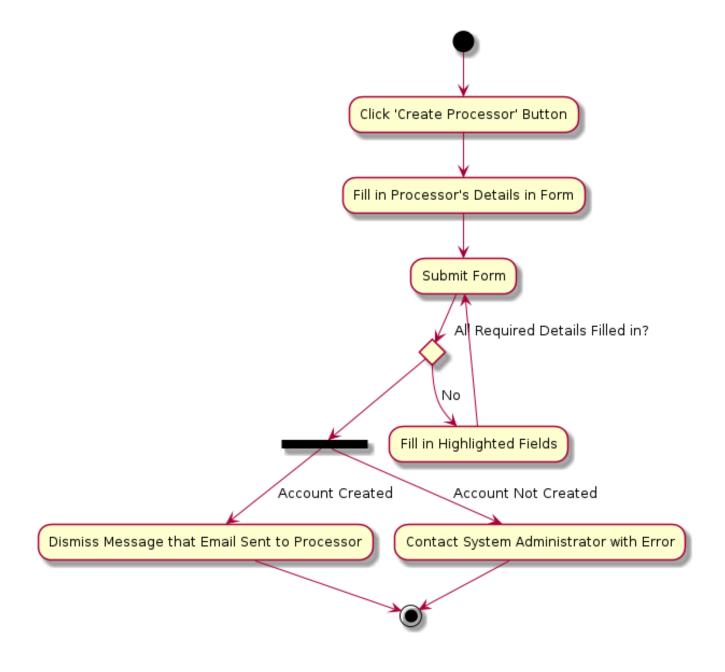


Figure 11: Create Visa Processor Account

Remove Visa Processor Account

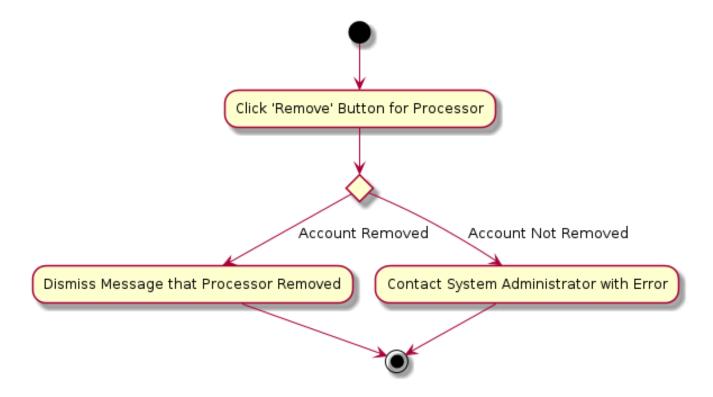


Figure 12: Remove Visa Processor Account

Edit Visa Processor Account

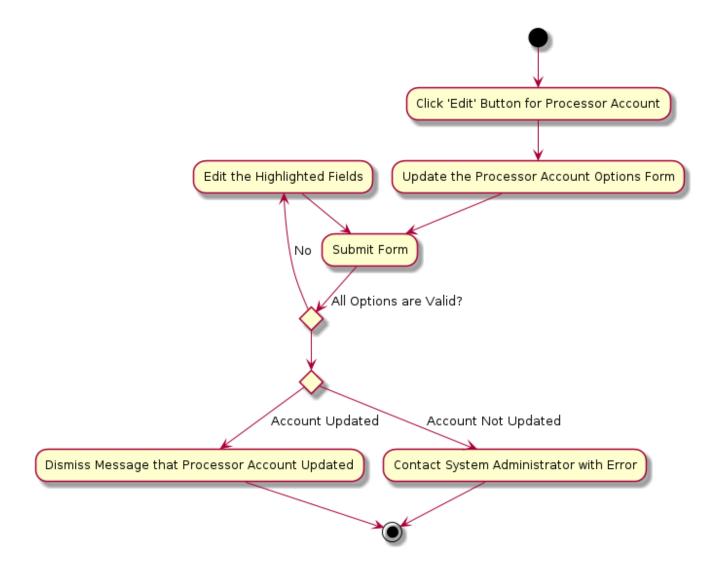


Figure 13: Edit Visa Processor Account