STRUCTURE-1 RAW SI Sighting ID Count Species ID Date Time Location Longitude Location Latitude User ID mage DESCRIPTION: This struction FROM PROCESS: 3-Sighting IO PROCESS: 2.2-Final Ray	Primary Key not null Foreign Key not null not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Iser Ratification	2 bytes 2 bytes 4 bytes 4 bytes 2 bytes that are inputted by the user	Stores the ID for the sighting Number of birds spotted Stores the ID of the species sighted Time at which sighting is recorded Longitude of sighting location Latitude of sighting location ID of the user who entered the sighting Image of the bird sighted
Sighting ID Count Species ID Date Time Location Longitude Location Latitude User ID mage DESCRIPTION: This struct FROM PROCESS: 3-Sighti TO PROCESS: 2.2-Final Rate STRUCTURE-2 RATIFIE Sighting Id Species ID	Primary Key not null Foreign Key not null not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Integer Integer Date-Time Float Float Integer Binary about the raw sightings	2 bytes 2 bytes 4 bytes 4 bytes 2 bytes 2 bytes	Number of birds spotted Stores the ID of the species sighted Time at which sighting is recorded Longitude of sighting location Latitude of sighting location ID of the user who entered the sighting
Count Species ID Date Time Location Longitude Location Latitude User ID Image DESCRIPTION: This struction FROM PROCESS: 3-Sighting Id Species ID	not null Foreign Key not null not null not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Integer Integer Date-Time Float Float Integer Binary about the raw sightings	2 bytes 2 bytes 4 bytes 4 bytes 2 bytes 2 bytes	Number of birds spotted Stores the ID of the species sighted Time at which sighting is recorded Longitude of sighting location Latitude of sighting location ID of the user who entered the sighting
Species ID Date Time Location Longitude Location Latitude Jser ID mage DESCRIPTION: This struct FROM PROCESS: 3-Sighti TO PROCESS: 2.2-Final Rate STRUCTURE-2 RATIFIE Sighting Id Species ID	Foreign Key not null not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Integer Date-Time Float Float Integer Binary about the raw sightings	2 bytes 4 bytes 4 bytes 2 bytes	Stores the ID of the species sighted Time at which sighting is recorded Longitude of sighting location Latitude of sighting location ID of the user who entered the sighting
Date Time Location Longitude Location Latitude Location Latitude User ID Mage DESCRIPTION: This structor FROM PROCESS: 3-Sightion FOOR PROCESS: 2.2-Final Research STRUCTURE-2 RATIFIE Sighting Id Species ID	not null not null not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Date-Time Float Float Integer Binary about the raw sightings	4 bytes 4 bytes 2 bytes	Time at which sighting is recorded Longitude of sighting location Latitude of sighting location ID of the user who entered the sighting
Location Latitude User ID mage DESCRIPTION: This structor FROM PROCESS: 3-Sighting FOR PROCESS: 2.2-Final Rates STRUCTURE-2 RATIFIE Sighting Id Species ID	not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Float Integer Binary about the raw sightings Iser Ratification	4 bytes 2 bytes	Longitude of sighting location Latitude of sighting location ID of the user who entered the sighting
Jocation Latitude User ID mage DESCRIPTION: This structure FROM PROCESS: 3-Sighting TO PROCESS: 2.2-Final Ratifies STRUCTURE-2 RATIFIES Sighting Id Species ID	not null Foreign Key ure stores the data ing Retrieval, 2.1-L atification	Integer Binary about the raw sightings Iser Ratification	4 bytes 2 bytes	Latitude of sighting location ID of the user who entered the sighting
User ID mage DESCRIPTION: This structor FROM PROCESS: 3-Sightion FOO PROCESS: 2.2-Final Research STRUCTURE-2 RATIFIE Sighting Id Species ID	ure stores the data ing Retrieval, 2.1-L atification ED SIGHTINGS	Binary about the raw sightings ser Ratification	2 bytes	ID of the user who entered the sighting
mage DESCRIPTION: This structor FROM PROCESS: 3-Sighting FO PROCESS: 2.2-Final Research ETRUCTURE-2 RATIFIE Eighting Id Especies ID	ure stores the data ing Retrieval, 2.1-L atification ED SIGHTINGS	Binary about the raw sightings ser Ratification		
DESCRIPTION: This structors FROM PROCESS: 3-Sighting Id Species ID	ing Retrieval, 2.1-L atification BD SIGHTINGS	about the raw sightings Iser Ratification	that are inputted by the user	
ROM PROCESS: 3-Sighting Idespecies ID	ing Retrieval, 2.1-L atification BD SIGHTINGS	Iser Ratification	that are inputted by the door	
TO PROCESS: 2.2-Final Race of the second state	atification ED SIGHTINGS			
STRUCTURE-2 RATIFIE Dighting Id Expecies ID	ED SIGHTINGS			
ighting Id pecies ID				
Sighting Id Species ID				
Species ID	Primary Kay			
•	i illiary itey	Integer	2 bytes	ID for the cumulative information of species sightings which happened at a place and time
ocation	Foreign Key	Integer	2 bytes	ID of the species sighted
	Foreign Key	Integer	2 bytes	ID of location
Count	not null	Integer	2 bytes	Number of specimens seen
Number of Sightings	not null	Integer	2 bytes	Number of sightings of the specimen
Month	not null	Text	50 Characters	Stores the month of sighting
mage		Binary	, , , , , , , , , , , , , , , , , , ,	Image of particular sighting
	the sightings which	•	users and can provide digestible infor	
			assis and can provide digestible into	imation about signtings
FROM PROCESS: 2.2-Fina	ai Kullication, 3-Sig	nung Ketrleval		
TO PROCESS:				
	1			
STRUCTURE-3 SPECIE	S			
Species ID	Primary Key	Integer	2 bytes	ID of the species
Common Name	not null	Text	50 Characters	Common name of the species
Scientific Name	not null	Text	50 Characters	Scientific Name of the species
DESCRIPTION: Stores info				
FROM PROCESS: 3.3.1-S	·		Add Species	
	pecies Retrieval, 2	.2-Filiai Kalilicalioli, 2.3	-Add Species	
TO PROCESS:				
STRUCTURE-4 LOCAT	IONS			
ocation ID	Primary Key	Integer	2 bytes	ID of the location grid
ongitude Start	not null	Float	4 bytes	Begining longitude of the grid
ongitude End	not null	Float	4 bytes	Ending longitude of the grid
_atitude Start	not null	Float	4 bytes	Begining latitude of the grid
_atitude End	not null	Float	4 bytes	Ending latitude of the grid
				Ending latitude of the grid
DESCRIPTION: Stores the		s in which signlings hav	e been submitted	
FROM PROCESS: 3.3.2-Lo	ocation Retrieval			
TO PROCESS:				
STRUCTURE-5 USER I	NFORMATION			
Jser ID	Primary Key	Integer	2 bytes	ID for a particular user
Jsername	not null	Text	50 Characters	Name of the user
E-mail	not null	Text	50 Characters	Email
Password	not null	Text	50 Characters	Password
DESCRIPTION: Stores the			JOO OHALACICIS	I GOOWOIG
JESURIF HUN: Stores the				
	intormation Proces	S		
FROM PROCESS: 1-User				
FROM PROCESS: 1-User	rmation Process			
FROM PROCESS: 1-User	rmation Process			
FROM PROCESS: 1-User	rmation Process			
FROM PROCESS: 1-User TO PROCESS: 1-User Info				
FROM PROCESS: 1-User FO PROCESS: 1-User Info	DETAILS	Text	50 Characters	Name of the user
FROM PROCESS: 1-User TO PROCESS: 1-User Info	DETAILS not null	Text Text	50 Characters 50 Characters	Name of the user Email
FROM PROCESS: 1-User TO PROCESS: 1-User Info	DETAILS not null not null	Text	50 Characters	Email
FROM PROCESS: 1-User Information of PROCESS: 1-User Information of Process: 1-User Information of Process: 1-User Information of Process of Pro	DETAILS not null not null not null	Text Text		
FROM PROCESS: 1-User Information of PROCESS: 1-User Information of Process of	DETAILS not null not null not null personal details of	Text Text the user	50 Characters	Email
FROM PROCESS: 1-User Information of Process: 1-User Informatio	DETAILS not null not null not null personal details of Information Proces	Text Text the user	50 Characters	Email
FROM PROCESS: 1-User Info	DETAILS not null not null not null personal details of Information Proces	Text Text the user	50 Characters	Email
FROM PROCESS: 1-User Information of PROCESS: 1-User Information of Process: 1-User Information of Process Information Infor	DETAILS not null not null not null personal details of Information Proces	Text Text the user	50 Characters	Email
FROM PROCESS: 1-User Info	DETAILS not null not null not null personal details of Information Proces	Text Text the user	50 Characters	Email
FROM PROCESS: 1-User Info	not null not null not null personal details of Information Process	Text Text the user	50 Characters	Email
FROM PROCESS: 1-User Information of Process: 1-User Informatio	not null not null not null personal details of Information Process rmation Process	Text Text the user ss ON DETAILS	50 Characters 50 Characters	Email Password
FROM PROCESS: 1-User Information of Process: 1-User Informatio	not null not null not null personal details of Information Proces rmation Process AUTHENTICATI Primary Key	Text Text the user s ON DETAILS Integer	50 Characters 50 Characters 2 bytes	Email Password ID for a particular user
FROM PROCESS: 1-User Information of Process: 1-User Informatio	not null not null not null personal details of Information Proces rmation Process AUTHENTICATI Primary Key not null	Text Text the user ss ON DETAILS Integer Text	50 Characters 50 Characters 2 bytes 50 Characters	Email Password ID for a particular user Name of the user
FROM PROCESS: 1-User Information STRUCTURE-5 USER Description From Process: 1-User Information FROM PROCESS: 1-User Information FROM PROCESS: 1-User Information STRUCTURE-5 USER A User ID Username Token	not null not null personal details of Information Process AUTHENTICAT Primary Key not null not null	Text Text the user ss ON DETAILS Integer Text Text Text	50 Characters 50 Characters 2 bytes 50 Characters 40 Characters	Email Password ID for a particular user
FROM PROCESS: 1-User Information FROM P	not null not null personal details of Information Process AUTHENTICAT Primary Key not null not null rr info related for lo	Text Text the user ss ON DETAILS Integer Text Text Text	50 Characters 50 Characters 2 bytes 50 Characters 40 Characters	Email Password ID for a particular user Name of the user
ROM PROCESS: 1-User Information TRUCTURE-5 USER Insername -mail assword ESCRIPTION: Stores the ROM PROCESS: 1-User Information TRUCTURE-5 USER Inserior TRUCTURE-5 USER Inserior ETRUCTURE-5 USER INSERI	not null not null personal details of Information Process AUTHENTICATI Primary Key not null not null er info related for lo	Text Text the user ss ON DETAILS Integer Text Text Text	50 Characters 50 Characters 2 bytes 50 Characters 40 Characters	Email Password ID for a particular user Name of the user

SER INFORMATION Registration				
	Contains user details	User Entity	1 User Info process	USER DETAILS
		1 User Info process	User Details Table	
rocess Registration response	Confirmation of adding user to database	User Details Table	1 User Info process	USER DETAILS
ser Registration response	Confirmation of adding user to database	1 User Info process	User Entity	USER AUTH DETAILS + USER DETAILS
ser Login	Contains user details for login	User Entity	1 User Info process	USER DETAILS
		1 User Info process	User Details Table	
ser Login Confirmation	Confirmation about user details	User Details Table	1 User Info process	Confirmation message
ser Login Response	Token and confirmation message for login	1 User Info process	User Entity	USER AUTH DETAILS
pdate user Information	Contains updated personal details of user like	User Entity	1 User Info process	USER INFORMATION
		1 User Info process	User Details Table	
odate user information response	Confirmation for updating user details	User Details Table	1 User Info process	Confirmation message
		1 User Info process	User Entity	
		·		
equest user Info	Request for all the data about current user	User Entity	1 User Info process	User Information Request
- 4		1 User Info process	User Details Table	
ser Information Response	Returns user data from database	User Details Table	1 User Info process	USER INFORMATION
		1 User Info process	User Entity	
		T GOOK IIIIG PROGGGG		
GHTING INPUT				
ew Sighting Input	Contains information about a new sighting	User Entity	2.1 User Ratification	RAW SIGHTING
aw Sighting Input	Information about a new sighting	2.1 User Ratification	Raw Sightings Table	RAW SIGHTING RAW SIGHTING
ser Ratification	Shows user the sightings which need to be ratified	2.1 User Ratification	User Entity B	RAW SIGHTING RAW SIGHTING
ser Ratification Result	Updated sighting information	User Entity B	2.1 User Ratification	RAW SIGHTING RAW SIGHTING
ser Ratified Sightings	User ratified sightings goes for final confirmation	2.1 User Ratification	2.1 Oser Ratification	RAW SIGHTING RAW SIGHTING
		2.2 Final Ratification		
pecies Confirmation	Request to for species information		Species Databse	Species Database Request
pecies Confirmation Result	Species information	Species Databse	2.2 Final Ratification	SPECIES
xpert Ratification	Sighting Information for expert verification	2.2 Final Ratification	Expert Entity	RAW SIGHTING
xpert Ratification Result	Confirmation/Denial about sighting possibilty	Expert Entity	2.2 Final Ratification	Confirmation message
ew Species	Species information to be added in database	2.2 Final Ratification	Admin	SPECIES
		Admin	2.3 Add Species	
		2.3 Add Species	Species Databse	
efined Sighting	Refined sighting information	2.2 Final Ratification	Refined Sighting Database	REFINED SIGHTING
ighting addition confirmation	Confirmation message about user's sighting	2.2 Final Ratification	2.1 User Ratification	Confirmation message
		2.1 User Ratification	User Entity	
IGHTING RETRIEVAL				
ROCESS 3.1				
equest Species List	Request for a list of species based on a condition	User Entity	3.1.1 Species Retrieval	Species List Request
		3.1.1 Species Retrieval	Species Database	
pecies List Response	Contains a list of species	Species Database	3.1.1 Species Retrieval	SPECIES
		3.1.1 Species Retrieval	User Entity	
pecies ID Sighting Request	Request for sightings of a scpecies based on ID	User Entity	3.1.1Species Retrieval	Species Sighting Request
		3.1.1 Species Retrieval	3.1.2 Sighting Retrieval	
		3.1.2 Sighting Retrieval	Refined Sighting Database	
pecies sighting Response	List of refined sightings for the species	Refined Sighting Database	3.1.2 Sighting Retrieval	REFINED SIGHTINGS
ÿ ÿ ¦		3.1.2 Sighting Retrieval	3.1.1 Species Retrieval	
		3.1.1 Species Retrieval	User Entity	
ROCESS 3.2		John Openio Helinova.	, occ,	
equest Location List	Request for a list of location grids based on a condition	User Entity	3.2.1 Locations Retrieval	Locations List Request
- 4	1.1545551.5. Silver of 100ation gride backet on a containen	3.2.1 Locations Retrieval	Locations Database	
ocaitons List Response	Contains a list of locations	Locations Database	3.2.1 Locations Retrieval	LOCATIONS
Journal Liot (Coopulate	Contained intermediate	3.2.1 Locations Retrieval	User Entity	LOGITIONO
ocaiton ID Sighting Request	Request for sightings at a location based on ID	User Entity	3.2.1 Locations Retrieval	Location Sightings Request
Jounton in Orginality Nequest	Troquest for signifings at a location based on ID	3.2.1 Locations Retrieval	3.2.2 Sighting Retrieval	Location orginings Nequest
	+		<u> </u>	
ocation sighting Dosposo	List of refined eightings for the leastion	3.2.2 Sighting Retrieval Refined Sighting Database	Refined Sighting Database	REFINED SIGHTINGS
ocation sighting Response	List of refined sightings for the location		3.2.2 Sighting Retrieval	INCLINED SIGHTINGS
		3.2.2 Sighting Retrieval	3.2.1 Locations Retrieval	
200556 2 2		3.2.1 Locations Retrieval	User Entity	
ROCESS 3.3	Doguest for data should the assessment or	Hoor Entity	2.2.4 Hoos Information Detrieval	Heavinto Descripti
equest User Information	Request for data about the current user	User Entity	3.3.1 User Information Retrieval	User Info. Request
		3.3.1 User Information Retrieval	Users Information Database	HOED WEGGEN
ser Information Response	Contains user's information	Users Information Database	3.3.1 User Information Retrieval	USER INFORMATION
		3.3.1 User Information Retrieval	User Entity	
ser ID Sighting Request	Request for sightings submitted by a user	User Entity	3.3.1 User Information Retrieval	User's Sightings Request
		3.3.1 User Information Retrieval	3.3.2 Sighting Retrieval	
		3.3.2 Sighting Retrieval	Raw Sighting Database	
		Day Sighting Datahasa	3.3.2 Sighting Retrieval	RAW SIGHTINGS
ser sightings Response	List of sightings submitted by the user	Raw Sighting Database	orone organism graniform.	TOWN GIGHTINGS
ser sightings Response	List of sightings submitted by the user	3.3.2 Sighting Retrieval	3.3.1 User Information Retrieval	TOW CICITINGS
ser sightings Response	List of sightings submitted by the user			TOWY CICITINGS

		Processes For WildSight		
S No.	Process Name	Description	Inbound Data Flows	Outbound Data Flows
	User Information Process	Handling any operation related to user information which includes registration, login,logout or retrieve user information or update user information comes under this process.	User credentilas Information, User Information Request, Updated user information	Authentication response, User Information Response, Updated user information response
	Sighting Input Process	operations related to taking input new sighting input from user and sending it for ratification to other users and in extreme scanerios to expert and then adding ratified sighting to database.	New Sighting Input, Confirmation/Denial from user, Confirmation/Denial from expert	Confirmation/Denial response to sighting owner, User Ratification request, Expert Ratification request
	Sighting Retrieval Process	This process handles operations which are required for retirieving data related to sightings. The data may be retrieved on the basis of location, species or the sightings that the user has submitted	Location Sighting Request, Species Sighting Request, User Sighting Request	Sighting Requests, Sighting Responses