DATA STRUCTURES AND DATA STORE DESCRIPTION

STRUCTURE-1 RAW	KEY	DATA TYPE	DATA SIZE/LENGTH	DESCRIPTION
JINUUIUKE-I KAW	/ SIGHTINGS			
		Intogor	2 hytos	Stores the ID for the eighting
Sighting ID Count	Primary Key not null	Integer Integer	2 bytes 2 bytes	Stores the ID for the sighting Number of birds spotted
Species ID	Foreign Key	Integer	2 bytes	Stores the ID of the species sighted
Date Time	not null	Date-Time	2 bytes	Time at which sighting is recorded
ocation Longitude	not null	Float	4 bytes	Longitude of sighting location
ocation Latitude	not null	Float	4 bytes	Latitude of sighting location
Jser ID	Foreign Key	Integer	2 bytes	ID of the user who entered the sighting
mage	1 oreign recy	Binary	2 bytes	Image of the bird sighted
	ructure stores the dat		s that are inputted by the user	intage of the bird digitied
FROM PROCESS: 3-Sig			s that are inputted by the user	
O PROCESS: 2.2-Fina	-	OSCI Tatilloation		
O PROCESS. 2.2-Filla	n Ratification			
TDUCTURE 2 DATE		•		
STRUCTURE-2 RATI			0.1.1.	ID for the considering information of an arise stability as which have a sent of a place and the constant of t
Sighting Id	Primary Key	Integer	2 bytes	ID for the cumulative information of species sightings which happened at a place and time
Species ID	Foreign Key	Integer	2 bytes	ID of the species sighted
Location	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
			users and can provide digestible info	rmation about sightings
FROM PROCESS: 2.2-F	Final Rtification, 3-Si	ghting Retrieval		
TO PROCESS:				
STRUCTURE-3 SPEC	CIES			
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 i			or characters	
) Add Cassiss	
FROM PROCESS: 3.3.1	1-Species Retrieval,	2.2-Final Ratification, 2.3	3-Add Species	
TO PROCESS:				
STRUCTURE-4 LOCA	ATIONS			
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 Start	not null	Float	4 bytes	Ending latitude of the grid
				Ending latitude of the grid
DESCRIPTION: Stores t		us in which signlings hav	ve been submitted	
FROM PROCESS: 3.3.2	2-Location Retrieval			
TO PROCESS:				
STRUCTURE-5 USE	R INFORMATION			
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 50 Characters	Password
			JO CHARACIEIS	I GOOTFOIG
DESCRIPTION: Stores to				
	ser Information Proce	ess		
	nformation Process			
FO PROCESS: 1-User II				
TO PROCESS: 1-User II	R DETAILS			
O PROCESS: 1-User II		Text	50 Characters	Name of the user
TO PROCESS: 1-User In STRUCTURE-6 USER Jsername	not null	Text	50 Characters	Name of the user
STRUCTURE-6 USEF Jsernamemail	not null	Text	50 Characters	Email
STRUCTURE-6 USEF Jsername E-mail Password	not null not null not null	Text Text		
STRUCTURE-6 USER Username E-mail Password DESCRIPTION: Stores t	not null not null not null the personal details of	Text Text of the user	50 Characters	Email
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to	not null not null not null the personal details of the ser Information Processing	Text Text of the user	50 Characters	Email
STRUCTURE-6 USER Jsername E-mail Password DESCRIPTION: Stores to	not null not null not null the personal details of the ser Information Processing	Text Text of the user	50 Characters	Email
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to	not null not null not null the personal details of the ser Information Processing	Text Text of the user	50 Characters	Email
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to	not null not null not null the personal details of the ser Information Processing	Text Text of the user	50 Characters	Email
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to FROM PROCESS: 1-User In	not null not null not null the personal details of the ser Information Process	Text Text of the user	50 Characters	Email
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to FROM PROCESS: 1-User In STRUCTURE-7 USEF	not null not null not null the personal details of ser Information Process Information Process R AUTHENTICAT	Text Text of the user ess	50 Characters 50 Characters	Email Password
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to FROM PROCESS: 1-User In STRUCTURE-7 USEF Jser ID	not null not null not null the personal details of the	Text Text of the user ess	50 Characters 50 Characters 2 bytes	Email Password ID for a particular user
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to FROM PROCESS: 1-User In STRUCTURE-7 USEF Jser ID Jsername	not null not null not null the personal details of the	Text Text of the user ess FION DETAILS Integer Text	50 Characters 50 Characters 2 bytes 50 Characters	Email Password ID for a particular user Name of the user
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to the store of the s	not null not null not null the personal details of ser Information Process Information Process R AUTHENTICAT Primary Key not null not null	Text Text Tof the user ess FION DETAILS Integer Text Text	50 Characters 50 Characters 2 bytes 50 Characters 40 Characters	Email Password ID for a particular user
STRUCTURE-6 USEF Jsername E-mail Password DESCRIPTION: Stores to FROM PROCESS: 1-User In STRUCTURE-7 USEF Jser ID Jsername Token DESCRIPTION: Stores to	not null not null not null the personal details of ser Information Process Information Process R AUTHENTICAT Primary Key not null not null user info related for least	Text Text Tof the user ess FION DETAILS Integer Text Text	50 Characters 50 Characters 2 bytes 50 Characters 40 Characters	Email Password ID for a particular user Name of the user
TO PROCESS: 1-User In STRUCTURE-6 USER USER USER USER USER USER USER USER	not null not null not null the personal details of ser Information Process Information Process R AUTHENTICAT Primary Key not null not null user info related for Information Process	Text Text Tof the user ess FION DETAILS Integer Text Text	50 Characters 50 Characters 2 bytes 50 Characters 40 Characters	Email Password ID for a particular user Name of the user

DATA FLOW DESCRIPTION

ATA FLOW NAME	DESCRIPTION	FROM	то	DATA STRUCTURE
ISER 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
<u> </u>	J	1 11333		
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
ser Logiii Nesponse	Token and commitmation message for login	1 Oser into process	OSCI LITHLY	OCENTACTITUE TAILS
Ipdate user Information	Contains updated personal details of user like	User Entity	1 User Info process	USER INFORMATION
puate user information	Contains appeared personal details of user like	1 User Info process	User Details Table	OOLIVIIVI ONWATION
ndata usor information reasons	Confirmation for undating upor details	User Details Table		Confirmation massage
pdate user information response	Confirmation for updating user details		1 User Info process	Confirmation message
		1 User Info process	User Entity	
	Description all the data about aureant year	Hoor Entity	1 Hear Info process	Lieur Information Degrees
equest user Info	Request for all the data about current user	User Entity	1 User Info process	User Information Request
		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	
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
ser Ratification	Shows user the sightings which need to be ratified	2.1 User Ratification	User Entity B	RAW SIGHTING
ser Ratification Result	Updated sighting information	User Entity B	2.1 User Ratification	RAW SIGHTING
ser Ratified Sightings	User ratified sightings goes for final confirmation	2.1 User Ratification	2.2 Final Ratification	RAW SIGHTING
pecies Confirmation	Request to for species information	2.2 Final Ratification	Species Databse	Species Database Request
pecies Confirmation Result	Species information	Species Databse	2.2 Final Ratification	SPECIES
	<u> </u>	2.2 Final Ratification		RAW SIGHTING
kpert Ratification	Sighting Information for expert verification		Expert Entity	
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
ghting 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
equest openes List	Trequest for a list of species based of a condition	3.1.1 Species Retrieval	Species Database	Opedies List Request
nacion List December	Contains a list of ansaiss		 	edecire.
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
		3.1.2 Sighting Retrieval	3.1.1 Species Retrieval	
		3.1.1 Species Retrieval	User Entity	
ROCESS 3.2		· ·		
equest Location List	Request for a list of location grids based on a condition	User Entity	3.2.1 Locations Retrieval	Locations List Request
	, 3 2 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3.2.1 Locations Retrieval	Locations Database	
ocaitons List Response	Contains a list of locations	Locations Database	3.2.1 Locations Retrieval	LOCATIONS
Journal Elot (Copolise	Contains a not of foodtions	3.2.1 Locations Retrieval	User Entity	LOOAHONO
ocaiton ID Sighting Doguest	Peguast for sightings at a location based on ID		3.2.1 Locations Retrieval	Location Sightings Doguest
ocaiton ID Sighting Request	Request for sightings at a location based on ID	User Entity		Location Sightings Request
		3.2.1 Locations Retrieval	3.2.2 Sighting Retrieval	
		3.2.2 Sighting Retrieval	Refined Sighting Database	
ocation sighting Response	List of refined sightings for the location	Refined Sighting Database	3.2.2 Sighting Retrieval	REFINED SIGHTINGS
		3.2.2 Sighting Retrieval	3.2.1 Locations Retrieval	
		3.2.1 Locations Retrieval	User Entity	
ROCESS 3.3				
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	
	Contains user's information	Users Information Database	3.3.1 User Information Retrieval	USER INFORMATION
ser Information Response		3.3.1 User Information Retrieval	User Entity	
ser Information Response	The state of the s	User Entity	3.3.1 User Information Retrieval	User's Sightings Request
·	Request for sightings submitted by a user			Joor o Orginarigo Moquota
·	Request for sightings submitted by a user		3 3 2 Sighting Retrieval	
·	Request for sightings submitted by a user	3.3.1 User Information Retrieval	3.3.2 Sighting Retrieval	
ser ID Sighting Request		3.3.1 User Information Retrieval 3.3.2 Sighting Retrieval	Raw Sighting Database	DAW CICLITINGS
ser ID Sighting Request	Request for sightings submitted by a user List of sightings submitted by the user	3.3.1 User Information Retrieval 3.3.2 Sighting Retrieval Raw Sighting Database	Raw Sighting Database 3.3.2 Sighting Retrieval	RAW SIGHTINGS
ser Information Response Ser ID Sighting Request Ser sightings Response		3.3.1 User Information Retrieval 3.3.2 Sighting Retrieval Raw Sighting Database 3.3.2 Sighting Retrieval	Raw Sighting Database 3.3.2 Sighting Retrieval 3.3.1 User Information Retrieval	RAW SIGHTINGS
ser ID Sighting Request		3.3.1 User Information Retrieval 3.3.2 Sighting Retrieval Raw Sighting Database	Raw Sighting Database 3.3.2 Sighting Retrieval	RAW SIGHTINGS

		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