

Get to Know Chimpanzee

Subject: Advanced Computer Science

Under guidance of:

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By:

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1. Idea

The main idea is to create a Desktop Application (Get to know Chimpanzees) which can be used to create awareness about chimpanzees in the community. In many chimpanzee range areas, people do not know that chimpanzees are endangered and protected by law. We should respect all beings because all life has intrinsic value, so we try to make a small-scale effort to create awareness through this Desktop Application.

2. Objective

The Objective is to create an application with simple but user-friendly interface which provides detailed information on diverse topics about chimpanzees like Evolution, Anatomy, Sub-Species, Habitat, Tool use, Conservation and many more. The application also has a gallery which aims to exhibit and document Chimpanzees living in zoos and wildlife sanctuaries, inspire action through education, and help save wildlife by supporting on-the-ground conservation efforts

3. Targeted user

The targeted user can be a person who is interested in learning about wildlife, particularly about Chimpanzees and their characteristics, behavior, habitat and more. The targeted user can be a school student or a research candidate or wildlife enthusiast or an avid reader. Lastly, the targeted user for this desktop application is a person who is keen on learning about chimpanzees and wants to contribute towards conservation of the chimpanzees.

4. Requirement and functionality:

- Application with simple but user-friendly interface which provides detailed information on diverse topics about chimpanzees.
- Quick accessibility of user desired information about chimpanzees which is facilitated through the filter functionality of the topics part of the application.
- Attractive photo gallery to attract especially young users of the application

5. Concept and visualization:

5.1. Week 1- First Visualization Draft

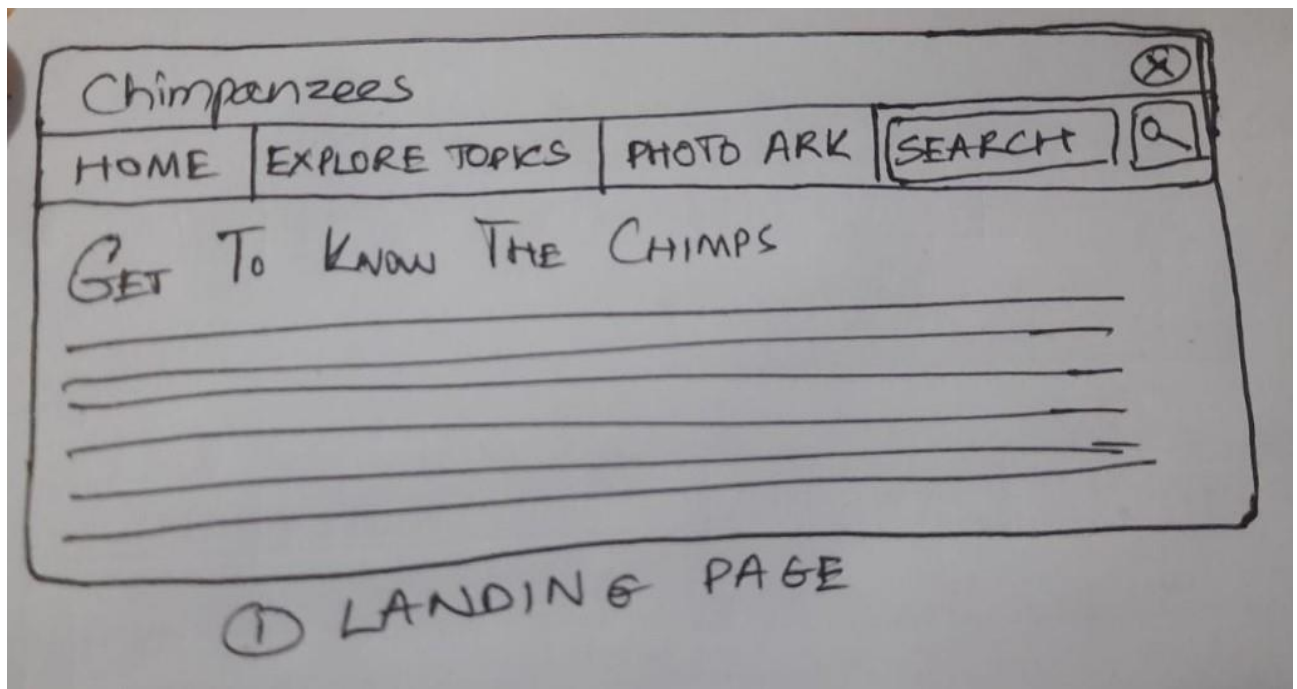


Figure 5.1.1: Landing page - Welcomes the user to the application. This page gives out brief information about chimpanzees (Common name, Scientific name, Avg. Size, Avg. weight, size relative to a 6ft man)

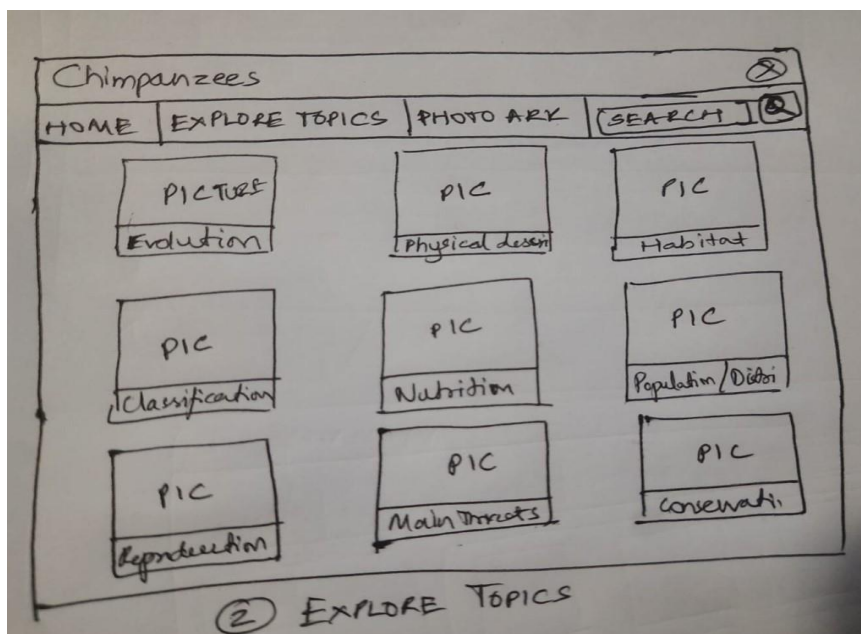


Figure 5.1.2: Explore page - To learn more about chimps the user can select to a topic at once out of all the given topics (Classification, Physical description, Habitat, Evolution, Nutrition & Diet, Population & Distribution, Reproduction, Main threats, Conservation)

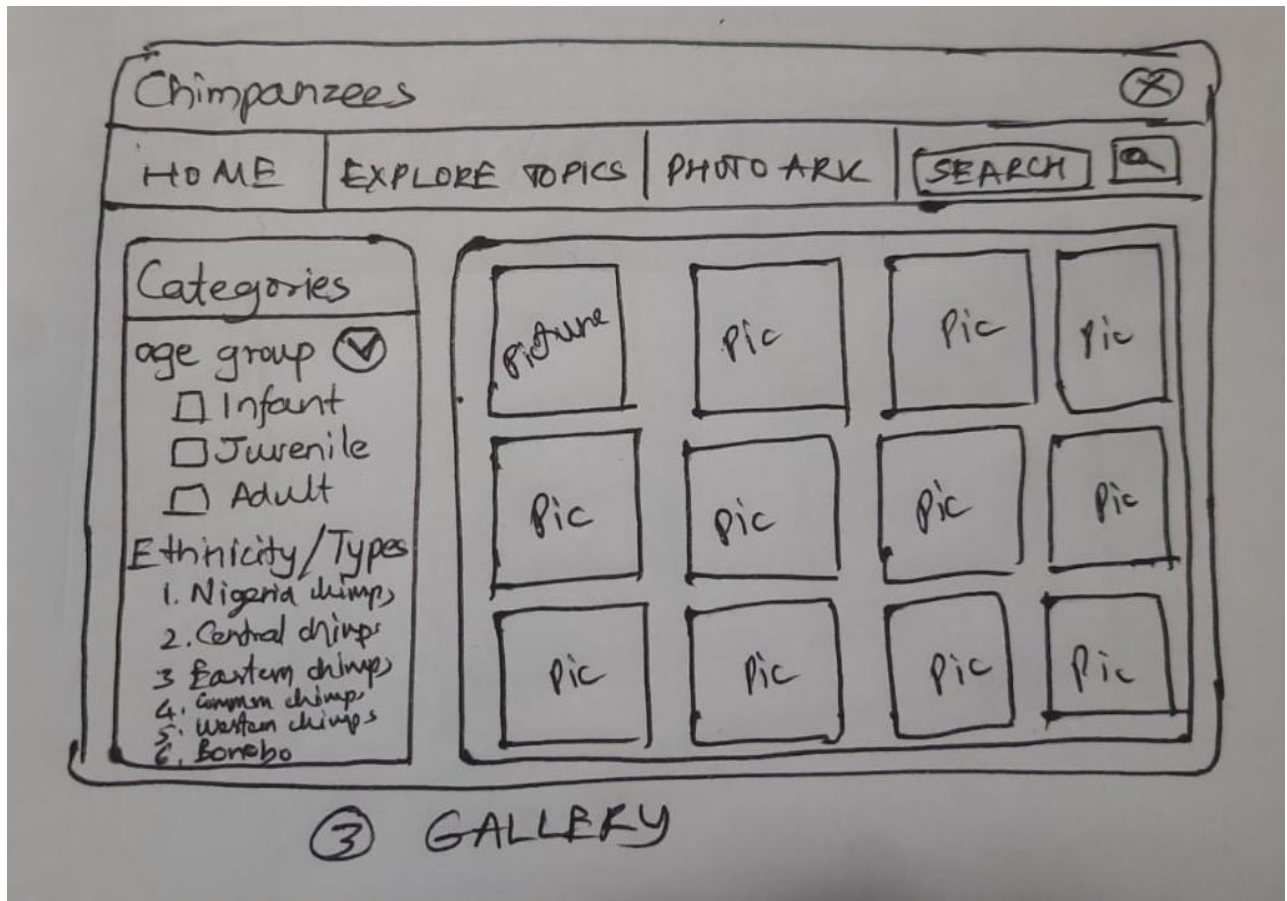


Figure 5.1.3: Photo ark - User can filter and view the pictures by categories in the gallery

5.2. Week 2- Second Visualization Draft

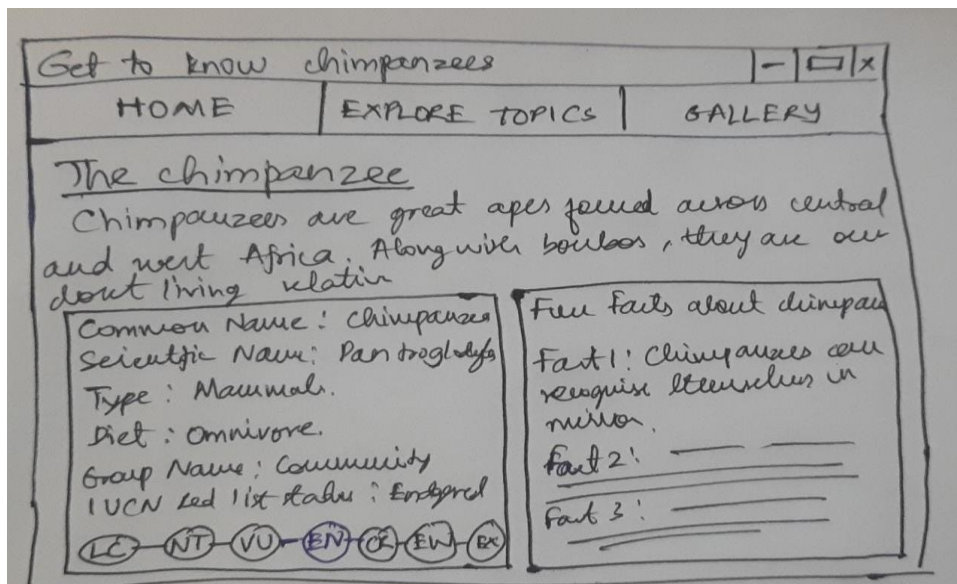


Figure 5.2.1: Landing page - Welcomes the user to the application. The landing page has a navigation bar which provides 3 buttons on top to move to different sections like explore topics or gallery. Below the navigation bar we have a brief description about chimpanzees and below this section we have 2 more blocks placed horizontally to one another, one block shows Key facts about chimpanzees and the second one displays fun facts about chimpanzees.

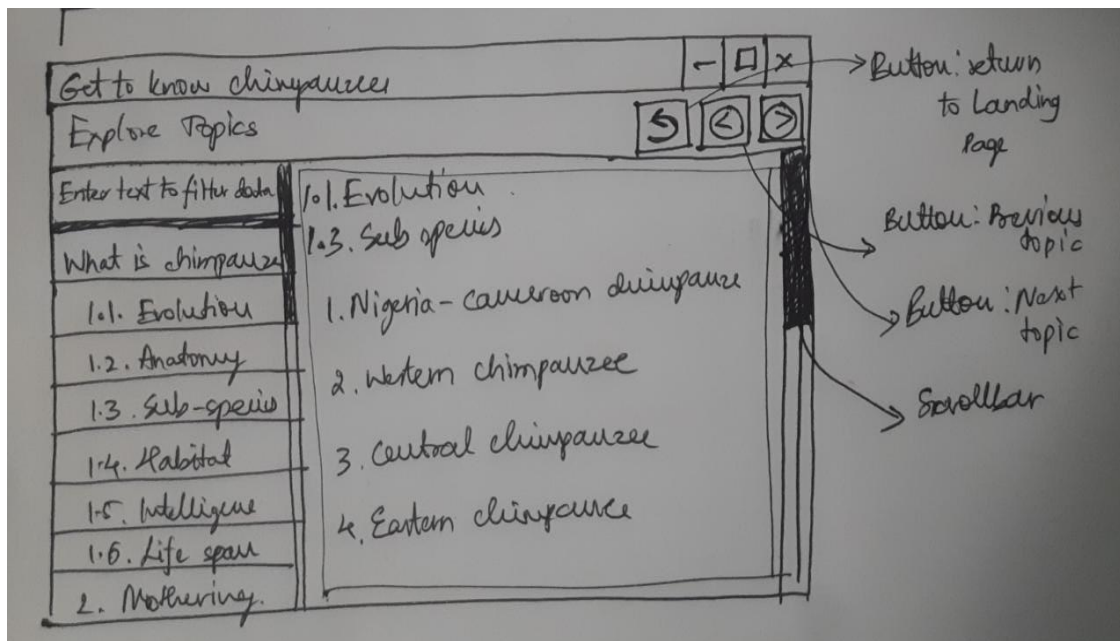


Figure 5.2.2: This window shows the explore section which displays diverse topics on chimpanzees in a list box. Every time you select an item in a list box the corresponding detailed description of the topics is showed on the right side of the screen using text block element. This page allows the user to toggle through diverse topics in the list box by clicking on previous or next button. If the content exceeds the screen height the text can be read by scrolling up and down. The user can return to the landing page by clicking on the home button.

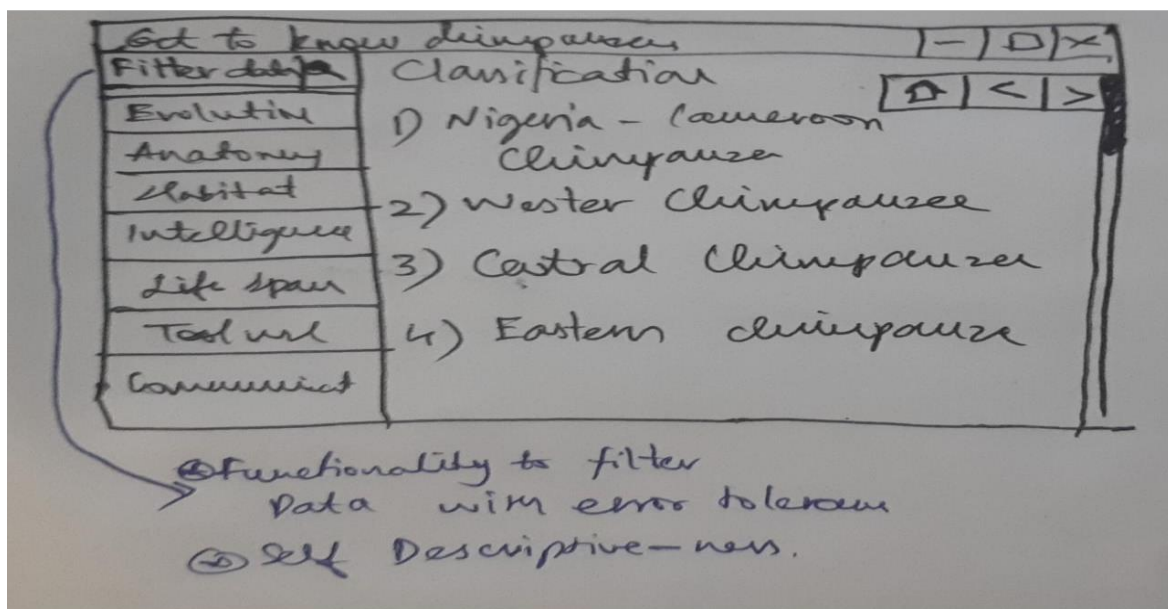


Figure 5.2.3: When the user clicks on the gallery button in the landing window it takes the user to the gallery ark window. This window displays the various pictures of chimpanzees. The pictures can also be filtered using the available filter on the top-right of the screen. The user can return to the landing window by closing this current window.

5.3. Week 3- Final Visualization Draft

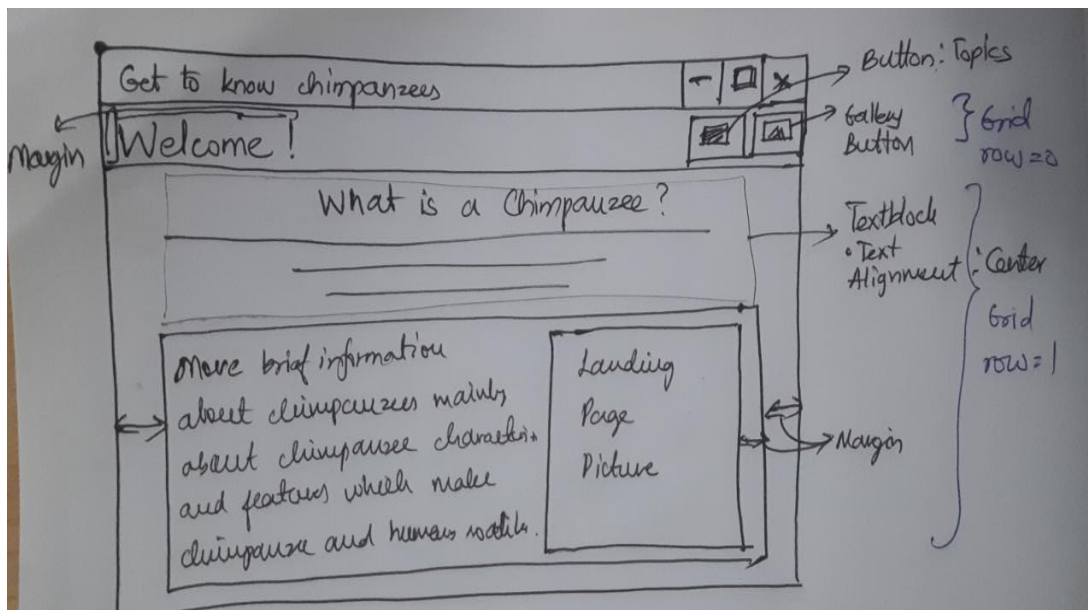


Figure 5.3.1. Landing Window which welcomes the user to the application. This window also enables user to move to gallery window or explore topics window using the buttons on the top right of the screen. The user also gets in short information about Chimpanzees and a welcome note.

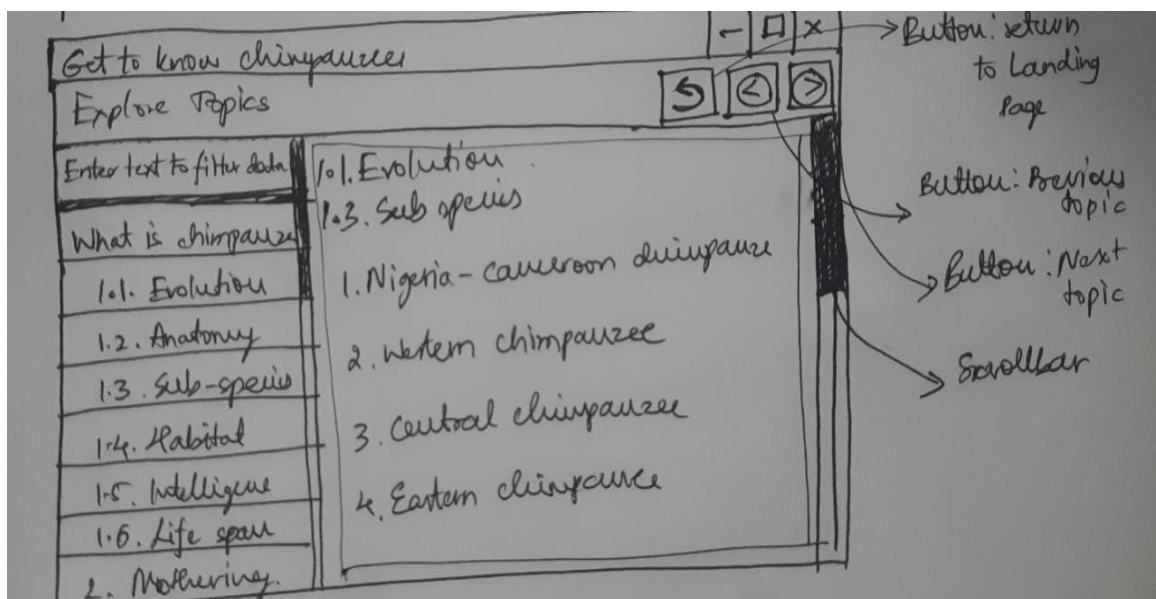


Figure 5.3.2. Explore topics page provides user detailed information about chimpanzees on various topics. The user can select an List item which holds Topics heading, once the user clicks on the list item the Text block on the right side displays all the detailed information on the right side of the screen in text block. The user can scroll up and down if all the text doesn't fit the window. The user can switch between topics by using next button and previous button, the user can also return to the landing window by clicking on the landing button. This window also provides user with filtering functionality using which the user can filter or search words to read the various topic.

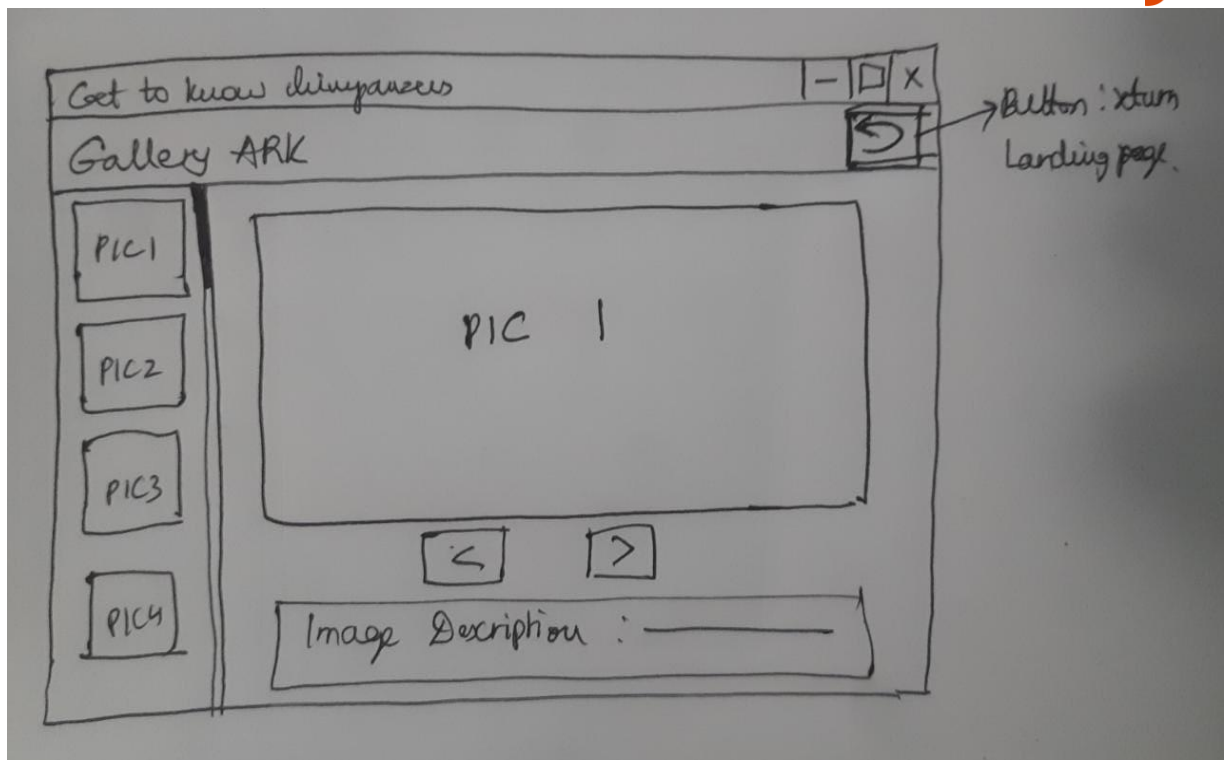
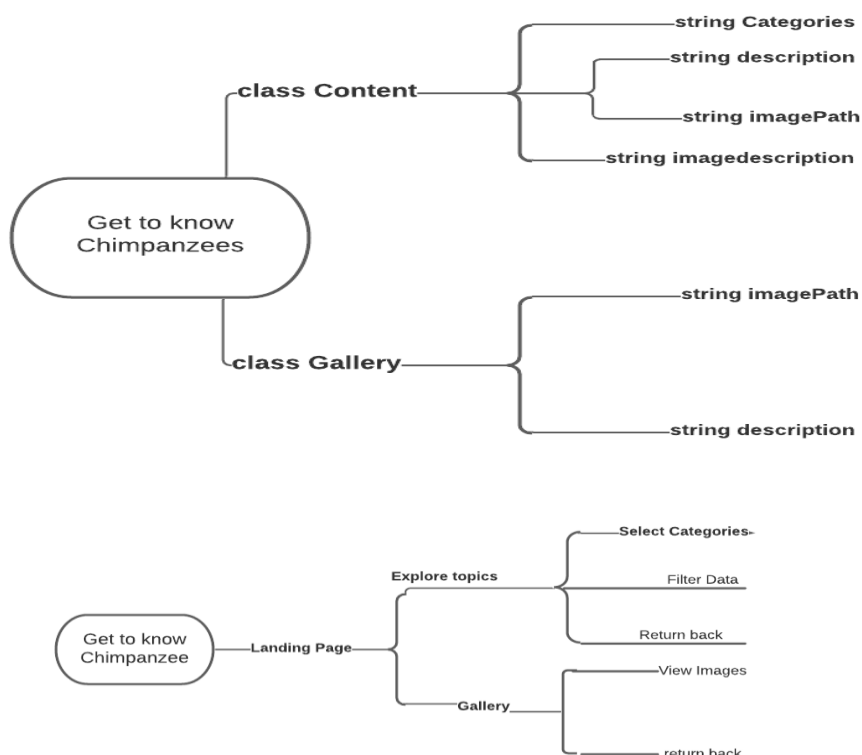


Figure 5.3.3. This window has a gallery which aims to exhibit and document Chimpanzees living in zoos and wildlife sanctuaries. The user can click on the thumb nails on the right side to view the pictures or the user can change the picture using the previous or the next button. Every picture has a description which is displayed in a text block below the picture. This window enables the user to return to the landing window with the help of a button in the top right corner.

5.4. Class Structure and Flow diagram



6. Implementation

6.1. User story: Jim, a user who is interested in learning about chimpanzees has downloaded the application, now he wants to browse diverse topics on Chimpanzees and find specific information about chimpanzees.

6.2. Use Case:

1. Jim opens the application and gets greeted by the landing window with a welcome note.
2. He clicks Explore topics button in Landing page to get more information.
3. He types in some keyword “Western Chimpanzees” and gets the categories where the keyword is listed.
4. He clicks on the photo gallery button to move to the photo galley window
5. He clicks the previous and next button to browse through the various pictures listed in the photo gallery.
6. He clicks on the Return button to return to the Landing page before he quits the application.

6.3. Application Flow:

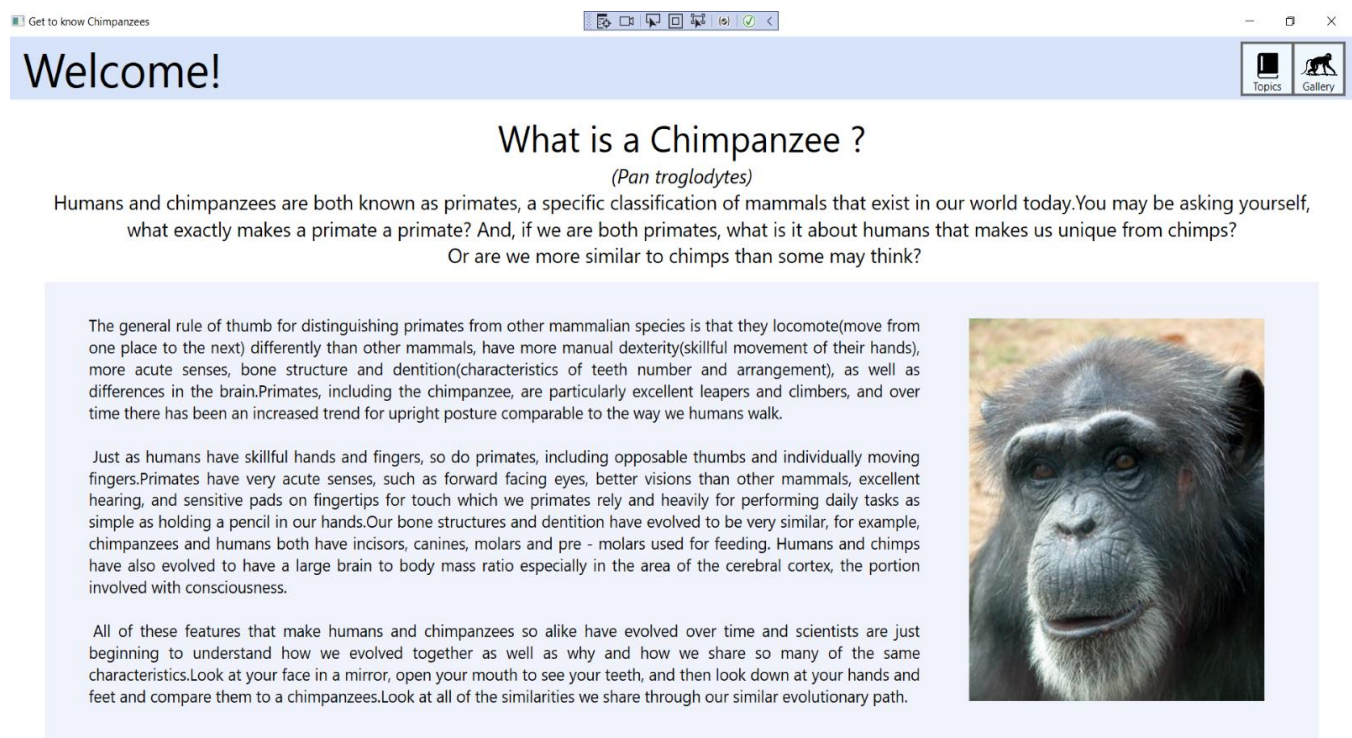


Figure 6.3.1. Landing Window which welcomes the user to the application. This window also enables user to move to gallery window or explore topics window using the buttons on the top right corner of the screen. The user also gets in-short information about Chimpanzees and a welcome note.

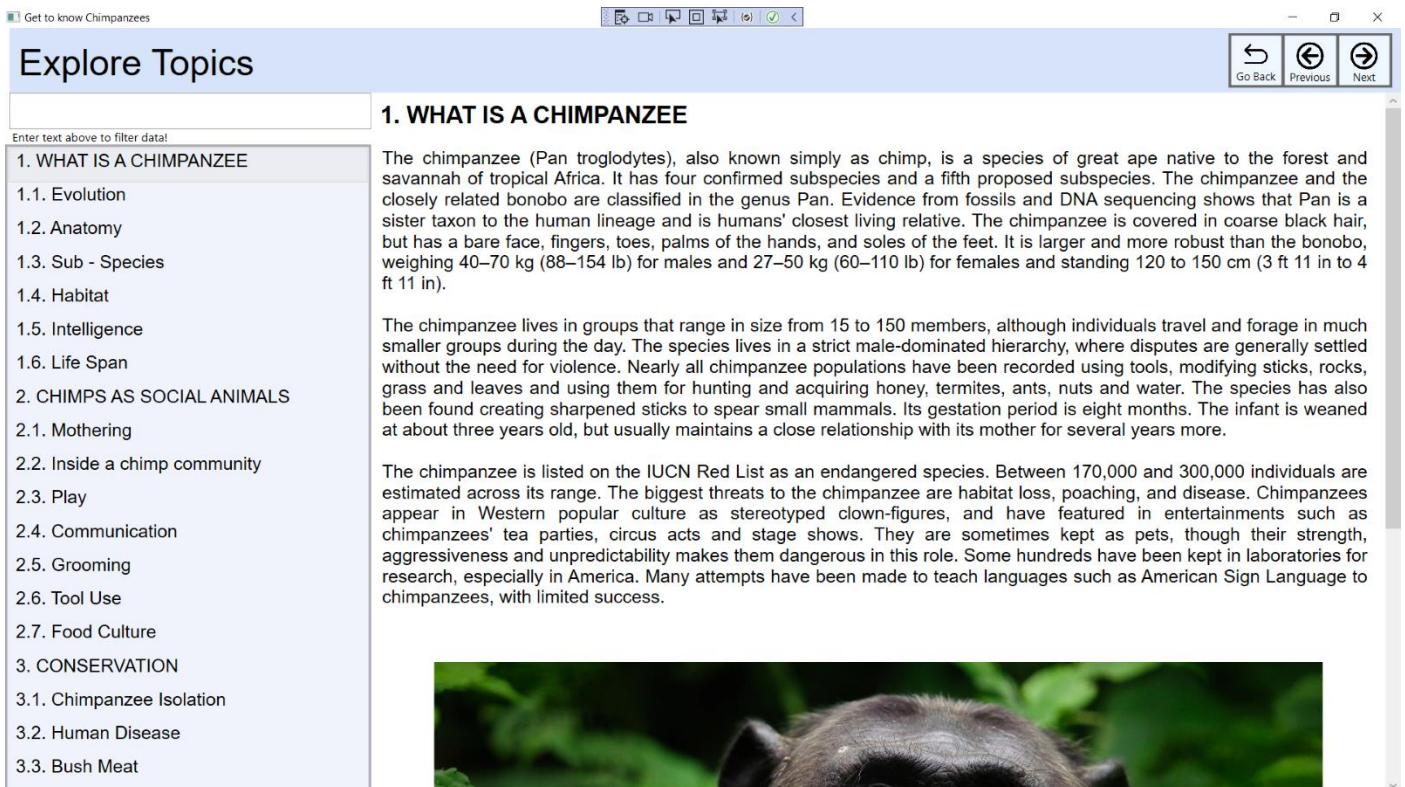


Figure 6.3.2. Explore topics window provides users detailed information about chimpanzees on several topics. The user can select a topic to know more about it.

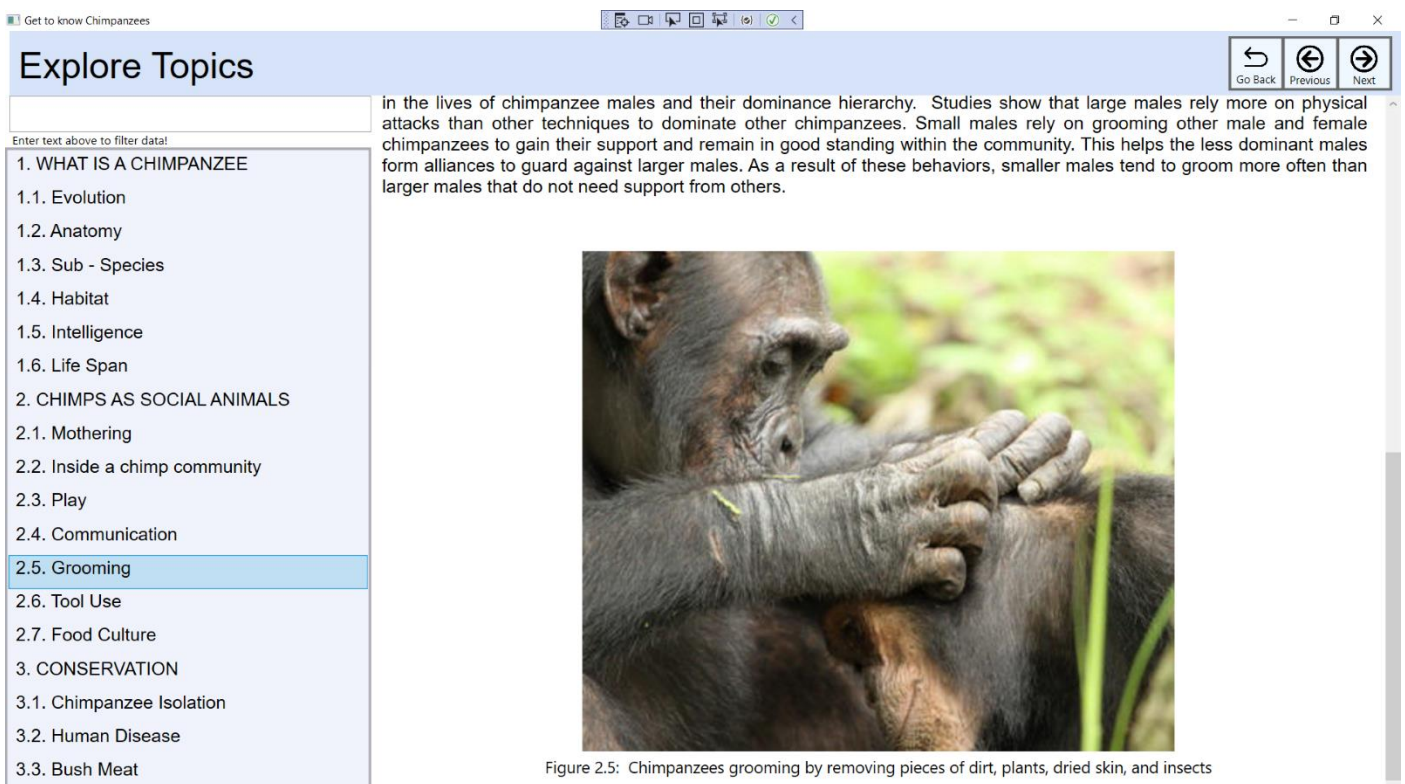


Figure 2.5: Chimpanzees grooming by removing pieces of dirt, plants, dried skin, and insects

Figure 6.3.3. The user clicks on categories on the left side to view detailed information on the right side of the screen in the text block. The user can scroll up and down if all the text doesn't fit the window. The user can switch between topics by using next button and previous button, the user can also return to the landing window by clicking on the landing button.

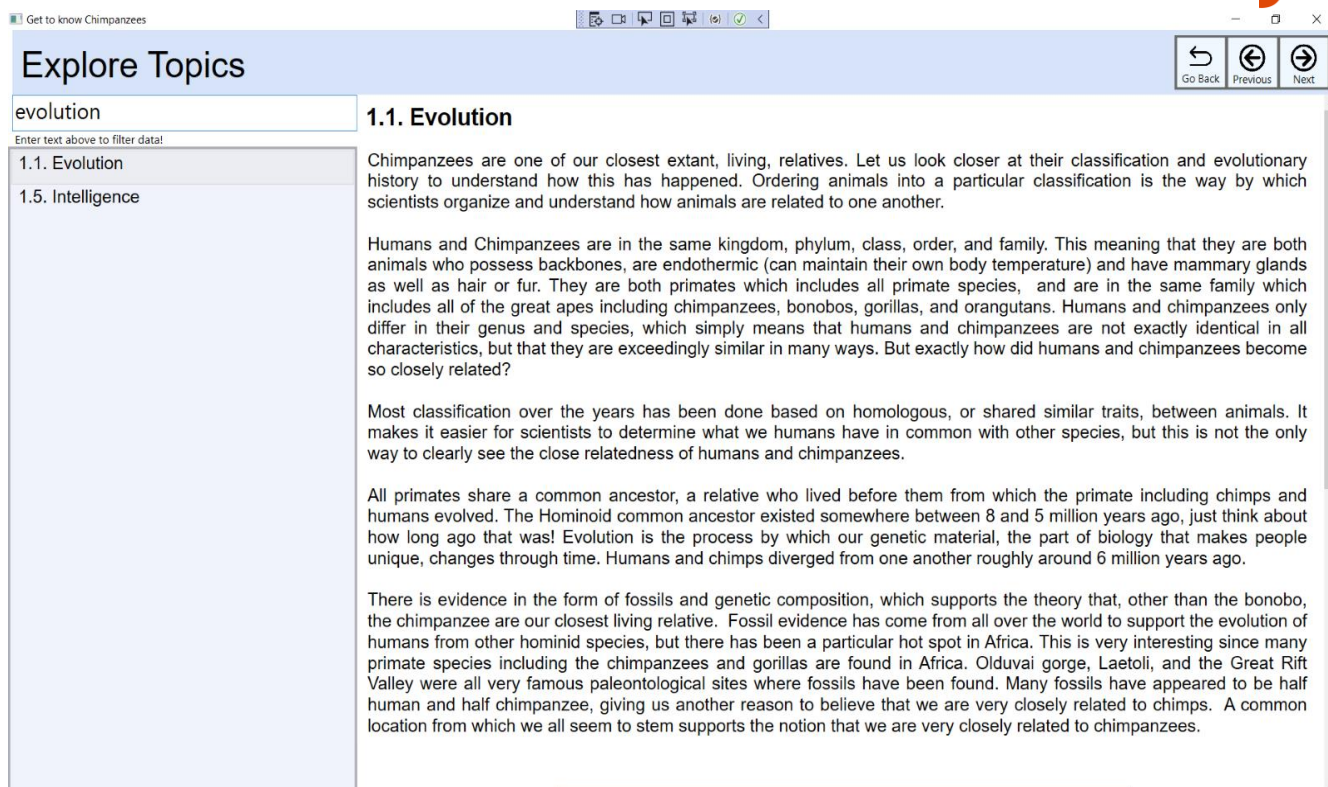


Figure 6.3.4. This window also provides user with filtering functionality using which the user can filter or search keyword to filter specific keyword. In the above picture user filters for keyword “evolution”. There are 2 topics which contains keyword “evolution”.

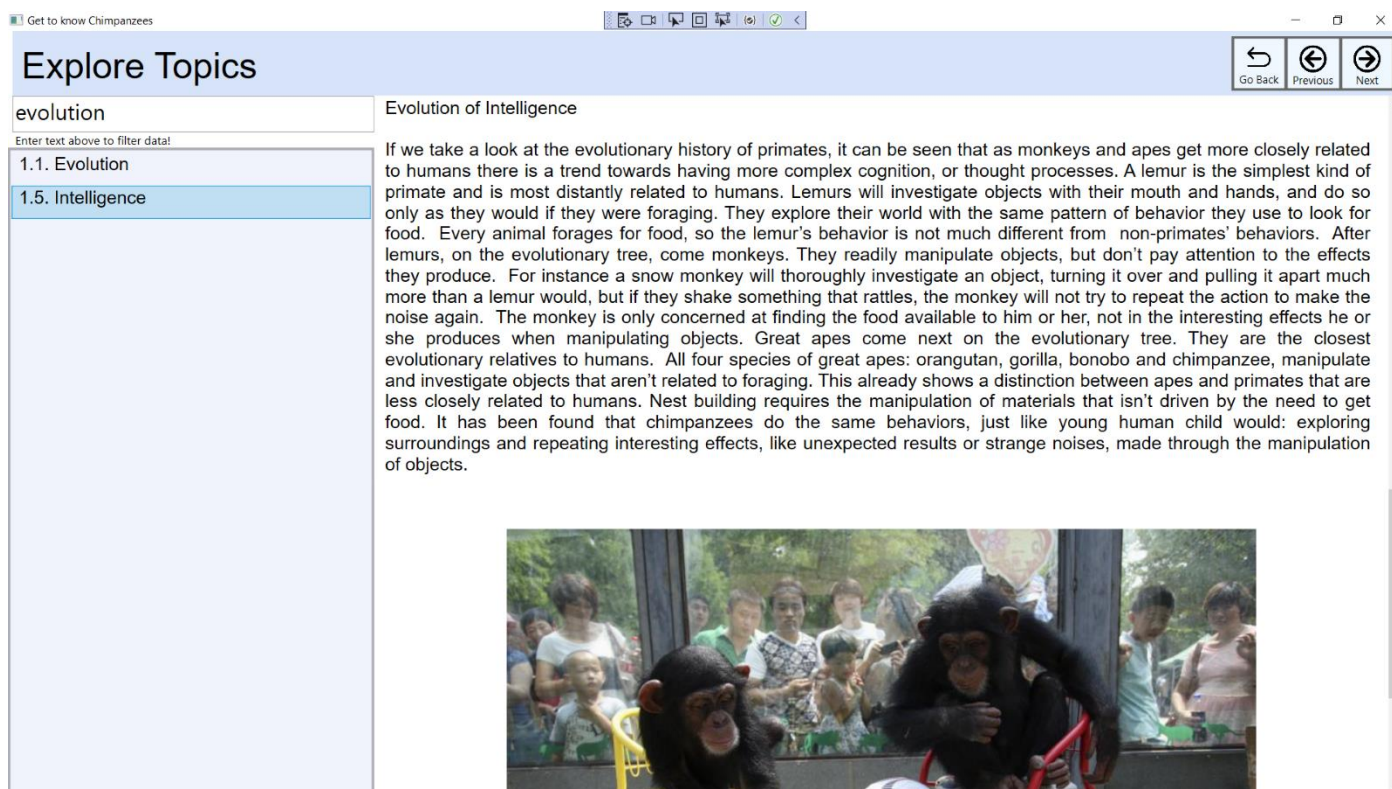


Figure 6.3.5. Once the user filters the data, he can pick between various topics which is listed after filtering by clicking on the category.

Welcome!

What is a Chimpanzee ?

(*Pan troglodytes*)

Humans and chimpanzees are both known as primates, a specific classification of mammals that exist in our world today. You may be asking yourself, what exactly makes a primate a primate? And, if we are both primates, what is it about humans that makes us unique from chimps?

Or are we more similar to chimps than some may think?

The general rule of thumb for distinguishing primates from other mammalian species is that they locomote (move from one place to the next) differently than other mammals, have more manual dexterity (skillful movement of their hands), more acute senses, bone structure and dentition (characteristics of teeth number and arrangement), as well as differences in the brain. Primates, including the chimpanzee, are particularly excellent leapers and climbers, and over time there has been an increased trend for upright posture comparable to the way we humans walk.

Just as humans have skillful hands and fingers, so do primates, including opposable thumbs and individually moving fingers. Primates have very acute senses, such as forward facing eyes, better visions than other mammals, excellent hearing, and sensitive pads on fingertips for touch which we primates rely and heavily for performing daily tasks as simple as holding a pencil in our hands. Our bone structures and dentition have evolved to be very similar, for example, chimpanzees and humans both have incisors, canines, molars and pre-molars used for feeding. Humans and chimps have also evolved to have a large brain to body mass ratio especially in the area of the cerebral cortex, the portion involved with consciousness.

All of these features that make humans and chimpanzees so alike have evolved over time and scientists are just beginning to understand how we evolved together as well as why and how we share so many of the same characteristics. Look at your face in a mirror, open your mouth to see your teeth, and then look down at your hands and feet and compare them to a chimpanzee. Look at all of the similarities we share through our similar evolutionary path.



Figure 6.3.6. The user can move to the gallery to view pictures by clicking on the gallery button on the top right corner of the screen.

Gallery ARK

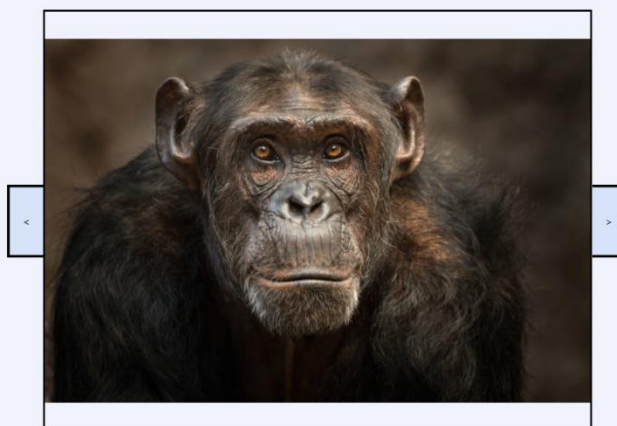


Image Description

"Chimpanzee from Kibale Forest national Park, Uganda"

Figure 6.3.7. The gallery window has gallery-roll on the left side. The user can click on the picture to view the individual image and read the description below the image.

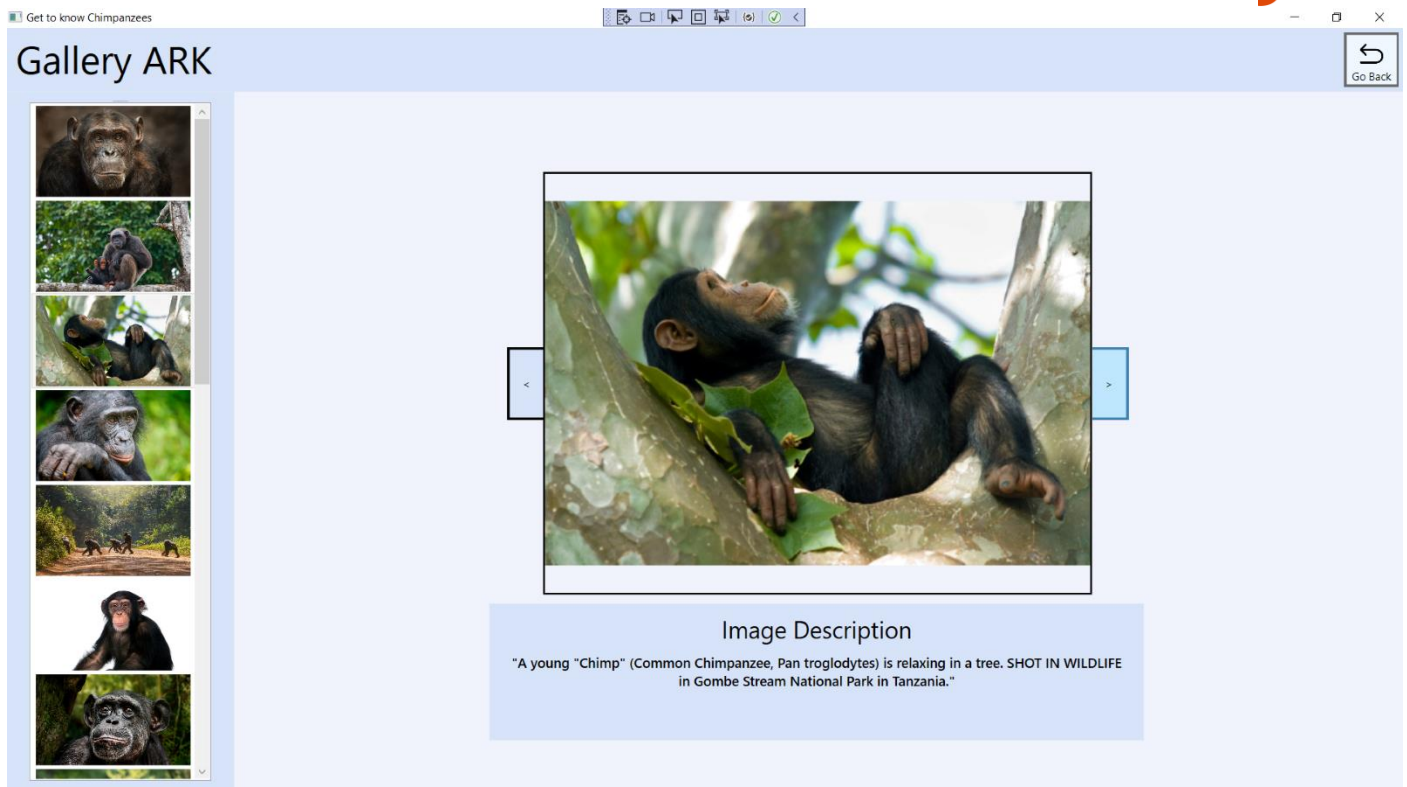


Figure 6.3.8. The user can also click on the button to select the previous picture or select the next picture.

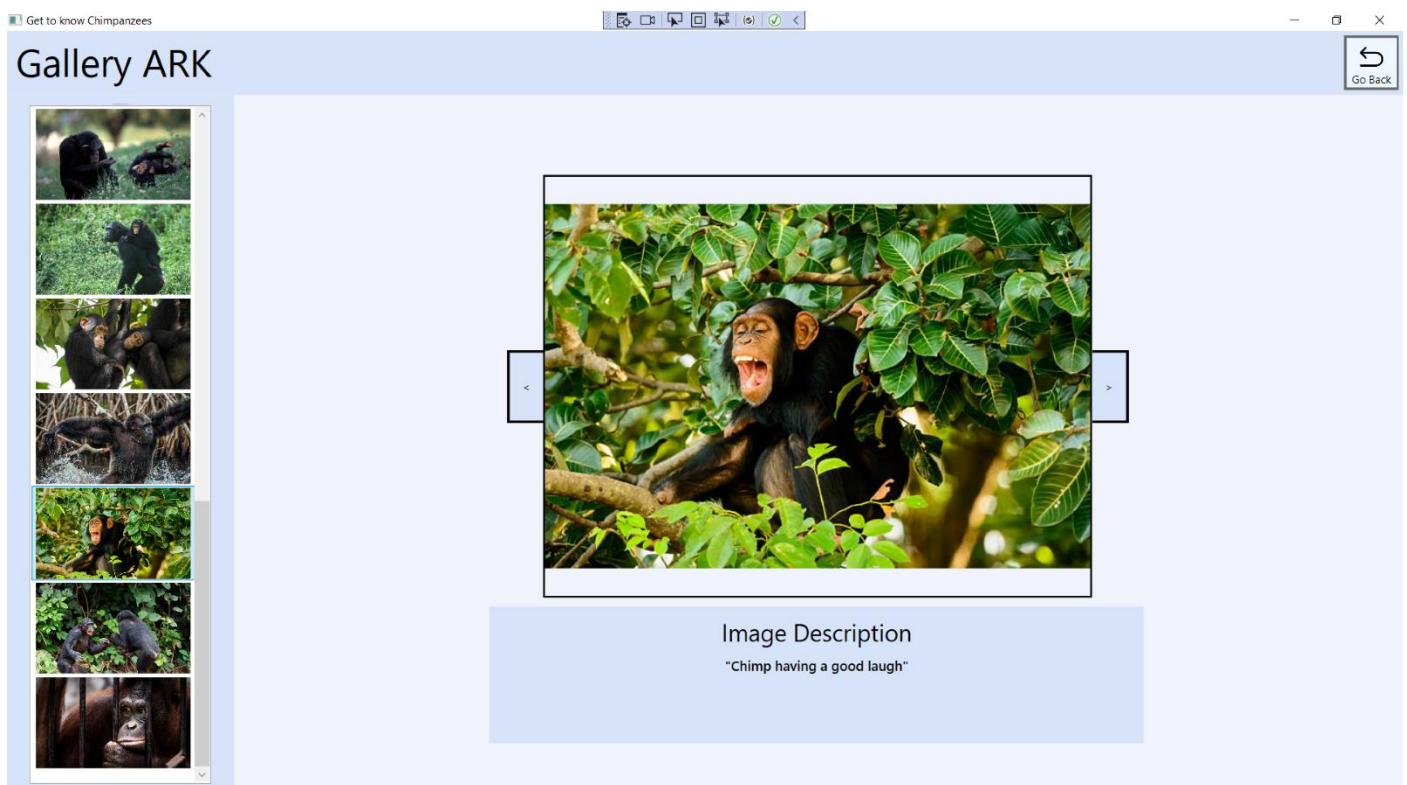


Figure 6.3.9. The user can view all the pictures in the gallery window and learn about the various actions of chimpanzee in the picture through description. The user can return to the main screen by clicking on the return button on the top right corner of the screen.

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Figure 6.3.10. The user returns to the main screen before exiting the application.

6.4 Compliance with ISO 9241 part 110, 125 and 11:

With the application I have tried to keep compliance with ISO norms where I use keep in mind:

6.4.1 The suitability for the task:

The application was developed keeping in mind the users who are interested in learning about chimpanzees and want to get specific information at their fingertips.

6.4.2. Visual representation of Information:

I have tried to implement graphic user navigation system where user is navigating through topics and photos can be achieved through click only.

6.4.3. Usability

For the specific group of users how are interested in chimpanzees would find my application compliant with Usability.

6.4.1. Gestalt Principle

The application was developed based on Gestalt Principle. From making the buttons, the filter section, and the application self-descriptive to following the law of proximity by placing elements which are related to each other closer.

7.Outcomes and conclusion:

7.1.1. Things achieved:

I was able to develop a desktop application by attending classes for 4 weeks, could have been better if the duration of the course at least was 8 weeks, as it was interesting to learn desktop development using C# and WPF. At first the concept looked a bit tough to grasp but with the workshop sessions on building the knowledge club application things became very clear.

I will continue working on my own personal projects to practice desktop development and to learn more about it.

7.1.2. Things I failed to achieve:

I failed to implement the concept of localization in my project as the data was very large, but I will try implementing it further after exams, as professor says the learning must never stop.

7.1.3. Self-assessment:

1. Understanding and following technology: 1.6

I grasped the concepts taught in the class and was able to implement is successfully in my application and worked every weekend practicing knowledge club app. So, I would rate myself 1.6

2. Design and ergonomics: 1.4

After redoing the visualization draft four times, I was finally able to achieve a good design while following ergonomics. It was achieved due to the feedback I got from the professor and the community. Doing mistakes at first and then learning from the mistakes helped me do a better job.

3. Achieving the objectives/results: 1.6

I was able to achieve all the functionalities required for my project but not localization.

4. Overall score: 1.5

P.S: I am very thankful to complete this course from a passionate professor like you! I appreciate your teaching style and methods. Thank you for a wonderful course.