

01

ROBOTICS AND ARTIFICIAL INTELLIGENCE

Suggested answers to end-of-chapter Workstation (page 12)

Explore with Whiz

Tick the Statement if it is true√ and Cross × if false.

 $1. \checkmark 2. \times 3. \times 4. \checkmark 5. \checkmark 6. \times$

Whiz Quiz

- 1. Robotics deals with the design, construction, operation, and use of robots which are machines that can perform tasks automatically.
- 2. Robots function with the help of hardware such as sensors, motors, and arms and software programming that teaches them how to perform tasks.
- 3. Artificial Intelligence (AI) refers to the ability of machines to learn, reason, and problemsolve like humans. AI has changed the world with technologies such as voice assistants, selfdriving cars, and medical diagnoses, making everyday tasks easier and more efficient.
- 4. Chatbots are AI programs designed to mimic conversation. They help with tasks, answer questions, and provide customer service.
- 5. When writing prompts for AI, it is important for the prompts to be clear, specific, and detailed so AI understands exactly what you are asking for.

Worksheet

Identifying parts of the prompt

- 1. Identify which part of the prompt is creative and which part is specific
 - Creative Part:"Hi, can you tell me about the current global warming situation in Pakistan?"
 - **Specific Part:** "Also, what are some actions we can take to reduce its impact?"

Rating the prompt

- 2. Rate the prompt on the following measures (where 1 is the lowest rating and 5 is the highest)
 - Clarity and Precision:4
 - Providing Context:3
 - Defining Format:4
 - Setting Parameters:3

Improving the prompt

- 3. Rewrite the same prompt to make it better.
 - Improved Prompt:"Hi, can you provide an overview of the current global warming situation in Pakistan? Additionally, please suggest some actionable steps that can be taken to mitigate its impact."

02

WORKING WITH FILES

Suggested answers to end-of-chapter Workstation (page 30)

Explore with Whiz

Choose the correct answer.

- 1. JPEG
- 2. Primary user interface of the computer
- 3. To make the image smaller to store
- 4. Retrieve them from the cloud

Whiz Quiz

- 1. The desktop on the computer consists of a wallpaper, icons, task bar, start menu, search bar, quick launch toolbar, system tray, clock, files, and folders.
- 2. Information should be stored in folders as they help organise information, making it easier to find, manage, and access files.
- 3. Three different ways in which we can customise the desktop are by changing the wallpaper, rearranging icons, and creating new folders.
- 4. Three benefits of having documents in PDF format are as follows: They are easy to share across devices. They are ideal for printing and viewing. The file size is smaller than other formats.
- 5. We should store images in JPEG format as JPEG files are compressed and reduce the file size while preserving the quality of the image, so they are ideal for storage and sharing.
- 6. Cloud storage allows you to store data online, ensures easy access from various computer devices, automatic backup, and protects you from accidental loss of data.

Worksheet

The key on a keyboard used to capture the current Desktop screen image. The practice of using online services to store, manage, and process data, rather than a local server or Wallpaper personal computer. Organisations typically use a large group of Print Screen networked computer servers for remote storage, Key processing, or distribution of large amounts of data. A service that allows users to store and access data Cloud and applications over the internet instead of on a Computing local computer. Data The main screen of a computer where icons and Centers windows appear.

Cloud File Sharing

The background image or design on a computer screen.

SEARCHING ON THE INTERNET

Suggested answers to end-of-chapter Workstation (page 38)

Explore with Whiz

Underline the correct answer

- 1. A web browser
- 2. Incognito mode
- 3. Google Chrome
- 4. SEO
- 5. keywords
- 6. social media

Whiz Quiz

- 1. A web browser is used to access and view websites on the internet, such as Google Chrome or Safari.
- 2. The History feature helps retrieve content we looked up earlier.
- 3. Keywords help search engines find relevant pages based on what people are searching for.
- 4. SEO helps websites appear more in search results, making it easier for people to find them.
- 5. We should only visit secure websites, use strong passwords and avoid clicking on suspicious ads to protect ourselves during browsing sessions.
- 6. Online advertisements are effective because they are targeted to specific interests of viewers.

Worksheet

This is a hands on activity. Student's must do the worksheet while using a search engine.



BUILDING A WEBSITE USING CANVA

Suggested answers to end-of-chapter Workstation (page 48)

Explore with Whiz

Fill in the blanks.

- 1. domain name
- 2. web hosting
- 3. web design
- 4. Canva
- 5. web host
- 6. subdomain
- 7. web hosting
- 8. compatible

Whiz Quiz

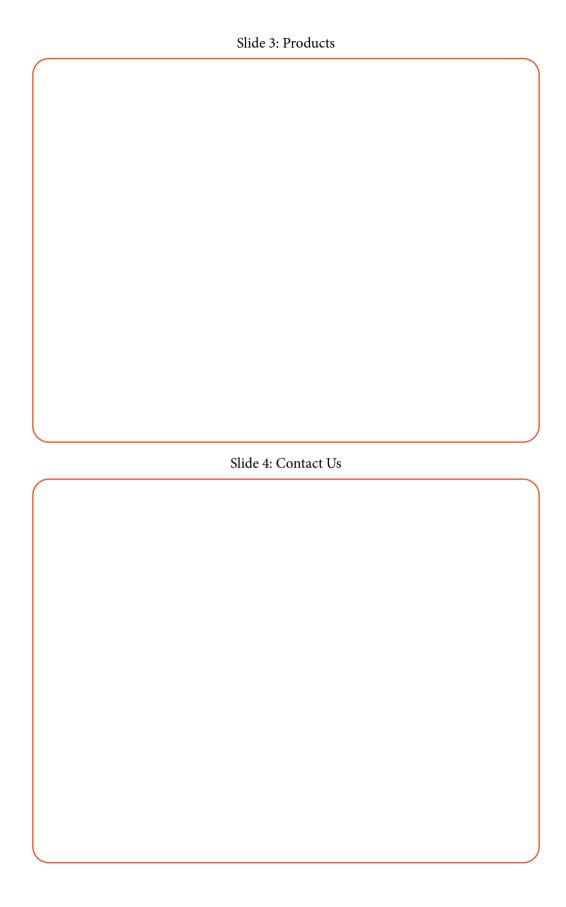
- 1. A website is a collection of web pages that are linked together, that contain text, images and interactive features.
- 2. A domain name is the unique address used to access a website. It is in the following format: server.organisation.type as for example, www.yahoo.com
- Uploading is the process of transferring data from your computer to the internet or another device. Downloading is the process of transferring data from the internet or another device to your computer.

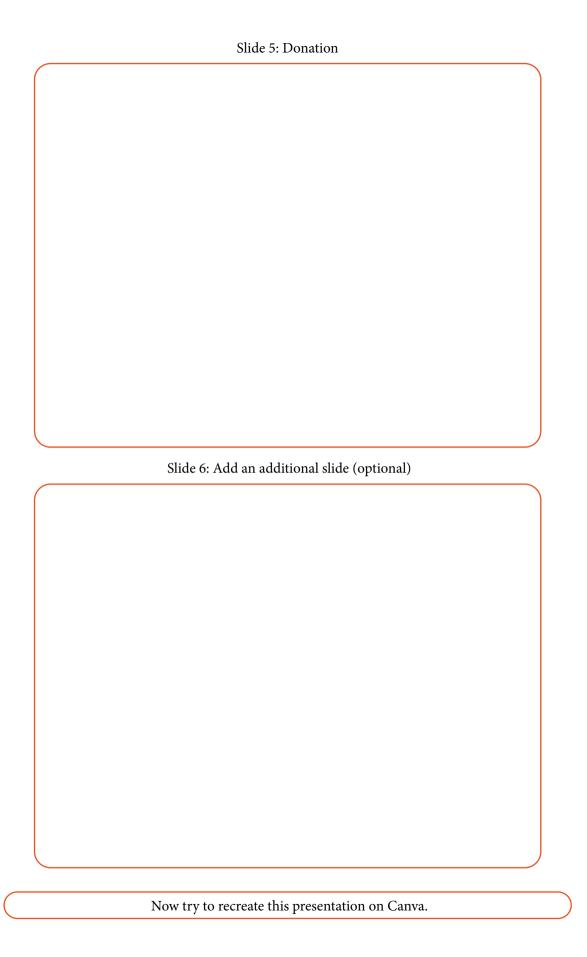
Worksheet

Make copies of the attached storyboarding worksheet and share with your students to work on individually.



Storyboarding Worksheet	Name:	
	Slide 1: Homepage	
	Slide 2: About Us	
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PROJECT DEVELOPMENT IN SCRATCHJR

Suggested answers to end-of-chapter Workstation (page 62)

Whiz Quiz

- 1. The ScratchJr language helps us create interactive stories, games, and animations by using visual programming blocks.
- 2. To add a new character as the mascot, we take the following steps:
 - i. We put our finger on the cat icon until we see the red X. Tap the red X to make the cat disappear.
 - ii. Choose a character from the library or create your own.
 - iii. Tap on the character to add it to the stage.
- 3. The different functions of the Home icon are to save the current project and exit to the Home page.
- 4. We add repeat blocks to make actions or movements happen multiple times, saving us from repeating the same blocks manually.
- 5. We can preview your project by tapping the green flag to start the project and see how it plays out on the screen.

Worksheet

Students will use the 'Interface Guide' and the 'Paint Editor Guide' from ScratchJr to complete this worksheet.



BEING A RESPONSIBLE DIGITAL CITIZEN

Suggested answers to end-of-chapter Workstation (pages 73-76)

Explore with Whiz

Fill in the blanks.

- 1. Copyright
- 2. plagiarism
- 3. copyright
- 4. plagiarism

Whiz Quiz

- 1. Copyright protects authors by giving them the exclusive right to reproduce, distribute, and display their work and ensure that they are given credit and compensation for their work.
- 2. Three ways we can respect a paper with copyright is by giving the author proper credit, getting permission from the author to use their work and not distributing their work for free.
- 3. A trademark protects logos, names, or symbols that represent a particular product or brand whereas a patent guards inventions or new technologies.
- 4. Plagiarism is the act of using someone else's ideas, words or work without giving them credit.
- 5. Three ways in which we can avoid plagiarism is to cite sources always, use quotation marks for direct quotes and rewrite paragraphs instead of copying.
- 6. We use a plagiarism checker to make sure that our work is original and to avoid copying someone else's work.

Worksheet

Scenario 1: Digital waste

Explanation: Raza's old photos and files that he does not need on his computer should be deleted as they take up space and slow down his device.

Scenario 2: E-waste

Explanation: Discarding electronic devices such as an old computer is e-waste, and if not recycled properly, it can harm the environment.

Scenario 3: Digital waste

Explanation: If Sara deletes her social media posts, she will be disposing unnecessary content taking up space on her profile.

Scenario 4: Ethical practice

Explanation: Ali's school donating old computers to a local community center is an example of an ethical practice because it benefits others who may not have access to computers.

Scenario 5: E-waste

Explanation: Musab disposing his broken tablet instead of recycling it can harm the environment.

Scenario 6: Digital waste

Explanation: Raza's old emails and documents stored in his email account take up space and cause unnecessary clutter.

Scenario 7: Ethical practice

Explanation: Samra's family recycling their old smartphones at an electronic recycling center is an ethical practice as it ensures valuable materials are reused.

Scenario 8: Digital waste

Explanation: Sara has software and applications that take up a lot of space on her computer and are of no use.

Scenario 9: Copyright infringement

Explanation: By copying and pasting a picture from the internet without giving credit to the original artist, Ali is violating copyright laws.

Scenario 10: Ethical practice

Explanation: Musab downloads a song and gives credit to the artist in his video, thereby acknowledging the artist's work.

Scenario 11: Plagiarism

Explanation: Raza is plagiarizing because he is presenting someone else's work as his own without giving them proper credit.

Scenario 12: Plagiarism

Explanation: Samra is plagiarizing as she is taking credit for someone else's writing and passing it off as her own.