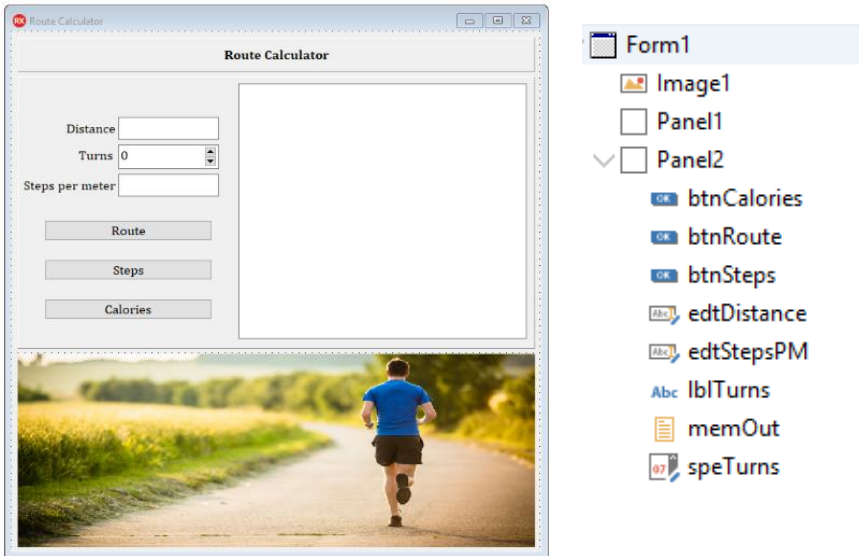


INFORMATION TECHNOLOGY: GRADE 10

TERM 4	Week 2	
TOPIC	Overview: Internet plug-in applications and services technologies.	
AIMS OF LESSON	At the end of this chapter, you will be able to: - Describe the different types of internet plug-ins - Explain the purpose of internet plug-ins - Describe the different internet services technologies.	
RESOURCES	Paper based resources	Digital resources
	<i>DBE Theory Textbook: Unit 9.1 (p. 155-158)</i> <i>(Use school issued textbook for the same content)</i>	<i>Links on the WCED ePortal</i> <i>The e-resources below has the actual URL to the websites</i>
PRE-KNOWLEDGE	- Electronic communication tools (Chapter 6) - Internet and WWW (Chapter 8)	
INTRODUCTION	<i>In this lesson you will learn more about web browser plug-ins (and add-ons/extensions) and Internet Service Technologies in general.</i>	
CONCEPTS AND SKILLS	- Define what is Internet services technologies. - Indicate why Internet services technologies are needed? - What is the Front-End of a website? - Programming languages for creating most front end of websites are: - HTML + CSS + JavaScript (JS) - What is the Backend or Server-side Services? - The following is used in the backend: - Databases such as MySQL - Programming languages such as Ruby, Java, Python, PHP - What is a Plug-in and why do we make use of it? - Describe what HTML5 is. - What impact did this version have on Plug-ins? - Describe what Add-ons / extensions are and why do we make use of them?	CAN YOU? - Indicate the major programming languages that the internet is built on? - Describe what a plug-in is? - Describe how a plug-in is used? - Describe what Add-ons / extensions are? - Explain the reasons for using Add-ons / extensions?

INFORMATION TECHNOLOGY: GRADE 10

ACTIVITIES / ASSESSMENT	Complete the activities for Activity 9.1 in book page 158 9.1.1. List three areas that Internet Service Technologies incorporates. 9.1.2. Work on your own to answer the following questions. a) In your own words, explain what a plug-in is. b) Why were plug-ins previously used?
CONSOLIDATION	- You should have a clear understanding what internet services technologies are. - You should have a clear understanding what supporting software is used when working with internet services technologies.
VALUES	<i>"The seven wonders of the word, to hear, to see, to touch, to taste, to feel, to laugh and to love" – Unknown</i>
E-RESOURCES	What a plug-in is: https://qrs.ly/dhab20y
Activity 9.1 Memorandum 9.1.1. Internet services technologies cover a very broad range of technologies that is used for web development, web production, web-design, networking, and e-commerce. These technologies are also part of website maintenance, database management, and graphic design. 9.1.2. a. A plug-in is an additional application that you can install on to increase a software's functionality. b. They were used with web browsers to understand interactive web pages and display videos and animations	

TERM 4	Week 2	
TOPIC	Software Development – Problem Solving	
AIMS OF LESSON	Develop problem solving skills	
RESOURCES	Paper based resources	Digital resources
	DBE Practical Textbook Gr 10: Chapter 3, 4, 7 and 8. (Use school issued textbook for the same content)	Links on the WCED ePortal: DataFiles The e-resources below has the actual URL to the websites
INTRODUCTION	Reinforce problem solving principals	
CONCEPTS AND SKILLS	Loops, calculations, rounding and formatting	
ACTIVITIES / ASSESSMENT	Open the incomplete project This incomplete project has no functionality at the moment. 	

A **circle route** can be calculated by getting the distance a person wants to jog, divided by the amount of turns a person would like to take. This will enable the user to start and stop at the same point.

Global variables

Create the following global variables:

- Doubles: dDistance and dStepsPerMeter
- Integers: iTurns and iSteps

onShow

- Create an onShow event and set initial values of 0 to all the variables.

btnRoute

Add code for the **btnRoute** to do the following:

- Get the distance in km, number of turns and steps per meter from the different components and store these values in the appropriate global variables.
- Display on **memOutput** the distance the person needs to jog, before turning.
Round off to three decimal places and use the following format.

```
Jog <xx> km
Turn
Jog <xx> km
Turn
...
You have completed your jog: <total> km
```

Sample output:

Distance
Turns
Steps per meter

Jog 3.125
Turn
Jog 3.125
Turn
Jog 3.125
Turn
Jog 3.125
Turn
You have completed your jog: 12.5 km

Distance
Turns
Steps per meter

Jog 3.242
Turn
Jog 3.242
Turn
Jog 3.242
Turn
You have completed your jog: 9.725 km

btnSteps

Add code for the **btnSteps** to do the following:

- Use the steps per meter to determine how many steps the person made during the jog. The amount of steps needs to be rounded up to a whole number (remember to first press **btnRoute** – all your variables are populated in this button).

Sample output

Distance
Turns
Steps per meter

Steps: 8750

Distance
Turns
Steps per meter

Steps: 6808

btnCalories

Add code for the **btnCalories** to do the following:

- An average person burns 0.04 calories per step. Display how many calories was burned during the jog. Display on the **memOutput**. Round to three decimal places.

Sample output:

Distance
Turns
Steps per meter

Calories per jog: 350.000

Distance
Turns
Steps per meter

Calories per jog: 272.320

CONSOLIDATION	<i>In this problem, you worked with decision making and used problem solving techniques.</i>
VALUES	<i>Thank you for working through this document! Stick to your hard work. You are creating an opportunity to better yourself. Your perseverance will bring dividends.</i>
E-RESOURCES	https://wcedportal.co.za/eresource/163746