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| Form Layout (Visual Design) | |  |  | | --- | --- | | Control | Properties | | label\_initial\_entry | Text = “Initial Distance to be converted”  Grid Row = 0  Grid Column = 0  Sticky = E | | Entry\_intial | Grid Row = 0  Grid Column = 1 | | Radio\_button\_kilometres | Text = “Kilometre”  Grid Row = 1  Grid Column = 0 | | Radio\_button\_miles | Text = “Miles”  Grid row = 1  Grid column = 1 | | Label\_conversion | Text = “Converted output”  Grid row = 2  Grid column = 0  Sticky = E | | Label\_conversion\_output | Grid row = 2  Grid column = 1  Relief = SUNKEN | | Button\_calculate | Text = “Calculate”  Grid row = 3  Grid column = 0 | | Button\_clear | Text = “Clear”  Grid row = 3  Grid column = 1 | | Button\_Close | Text = “Close”  Grid row = 3  Grid column = 2 | |  |  | |  |  | |  |  | |  |  | |  |  | |
| NAME: Zulkifli Temitope Salami  DATE: 12/03/2022  PROGRAM DESCRIPTION: A Distance unit conversion GUI Application that allows initial entry for a distance to be converted to either Kilometres (km) or miles (mi).  PROGRAM NAME: Distance Unit Conversion GUI Application  Pseudocode for Determining Window Size:   * Import tkinter library and tkinter tix library * Import sys for easy exit functionality * Define functions for converting input to either kilometres or miles in relation to radio button * Define function for clearing window * Define function for closing window * Create and name a tk window, define window size and window minimum size, define the title of window * Create a Ballon object for tooltips * Define radio button variable “v” as an integer * Set initial radio button selection to kilometre * Create widgets on row 0 * Create widgets on row 1 * Create widgets on row 2 * Create widgets on row 3 * Add hotkeys for executing calculate function, clear function, close function   Pseudocode for Generating Output Labels:   * CONVERSION\_FACTOR\_MILES = 0.62137119 * CONVERSION\_FACTOR\_KILOMETRE = 1.609344 * Validate input as numeric * Check if initial entry is positive number. If not positive, display error message * Calculate conversion from initial entry to kilometre if kilometre radio button selected * Calculate conversion from initial entry to miles if miles radio button selected * Display Kilometre or miles output in relation to selected radio button, in output label field as 2 decimal places |

# Desk Check

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| --- | --- |
| Entry\_initial | Result |
| djhdbsm | Error: All input must be a number |
| -98 | Error: All input must be positive |
| 62.01 | Program run successfully |
| -0.76467 | Error: All input must be positive |
| 29.89 | Program run successfully |