Pseudocode for Bouncing Ball Program

**Pseudocode for Command Button (Calculate)**

When Calculate is clicked

If the **Drop Height** is greater than 10 metres

Display Message:" Invalid Value ! Please enter a valid value equal to or less than 10m "

Set **Total Distance** to “ “

Set **Total Bounces** to “ “

Set **Drop Height** to “0“

Hide **Total Distance**

Hide **Total Bounces**

Hide **Label for Total Distance**

Hide **Label for Total Bounce**

Hide **Metres for Total Distance**

If the **Drop Height** is greater than or equal to 0.01 metres and the **Drop Height** less than 10m or if **Drop Height** is equal to 10m then:

Set **Total Distance** to “ “

Set **Total Bounces** to “ “

Show **Total Distance**

Show **Total Bounces**

Show **Label for Total Distance**

Show **Label for Total Bounce**

Show **Metres for Total Distance**

While **Drop Height** is greater than 0.01m

Add 1 to **Total Bounces**

**Total Distance** = **Total Distance** + **Drop Height** + (**Drop Height** multiplied by 0.75)

Format the **Total Distance** so that it is rounded to 2 decimal places.

Multiply the **Drop Height** by 0.75

Loop (Repeat) this instructions

Reset **Drop Height** to 0

**Pseudocode for Reset Button (In Menu)**

Set **Total Distance** to “ “

Set **Total Bounces** to “ “

Set **Drop Height** to 0

Hide **Total Distance**

Hide **Total Bounces**

Hide **Label for Total Distance**

Hide **Label for Total Bounce**

Hide **Metres for Total Distance**

**Pseudocode for Quit Button (In Menu)**

When clicked =

End the Program/Close the Window

**Pseudocode for Instructions Button (In Menu)**

When Instructions is clicked:

Display Message:

To calculate the total distance the ball travels and total number of times the ball bounces when dropped from a specified height, press the button labelled 'Calculate'. To enter the specified height, click on the text box between the labels which have 'Height Dropped' and 'Metres' written on them. "

**Pseudocode for About Button (In Menu)**

Display Message: “Created by David Charkey (2015)”