Main

* LCD shows ‘Please enter the radius:’
* assign radius to variable ‘radius’
* assign variable ‘mode’ = 0
* do nothing (waiting interrupt)

Interrupt 1 (if sensor input 1) (the sensor interrupt)

* start timer1
* stop timer2 (maybe set a timer counter that launch timer 1 and 2 in sequence here)
* read the data from timer2, assign it to variable ‘deltaT’
* if deltaT < a certain value (it should be the clock speed or something), assign speed = 0
* otherwise assign variable ‘speed’ = 2\*pi\*radius/deltaT (maybe setup a stack here? easier for data analysis)
* back to main

Interrupt 2 (if bottom1 press) (reset the radius)

* LCD shows ‘Please enter the radius:’
* assign radius to variable ‘radius’
* back to main

(Or we can just reset the whole system)

Interrupt3 (if real time counter adds 1 second)

* read the time from timer1 and assign to variable ‘ZeroTest’ (the counter for timer also apply here)
* if ZeroTest > 2 second, speed = 0
* mode check
* if mode =0
* show the speed data on the LCD screen(we can set another function here called ‘show speed in meter’ here or just write code here?)
* if mode = 1
* apply mode code
* if mode = 2
* apply mode code
* back to main

Interrupt4 (if bottom2 press) (mode change)

* mode = mode +1
* if mode =3, mode = 0
* -back to main