



# CET4104 – MOBILE PROGRAMMING

Week 10 – 17.05.2023

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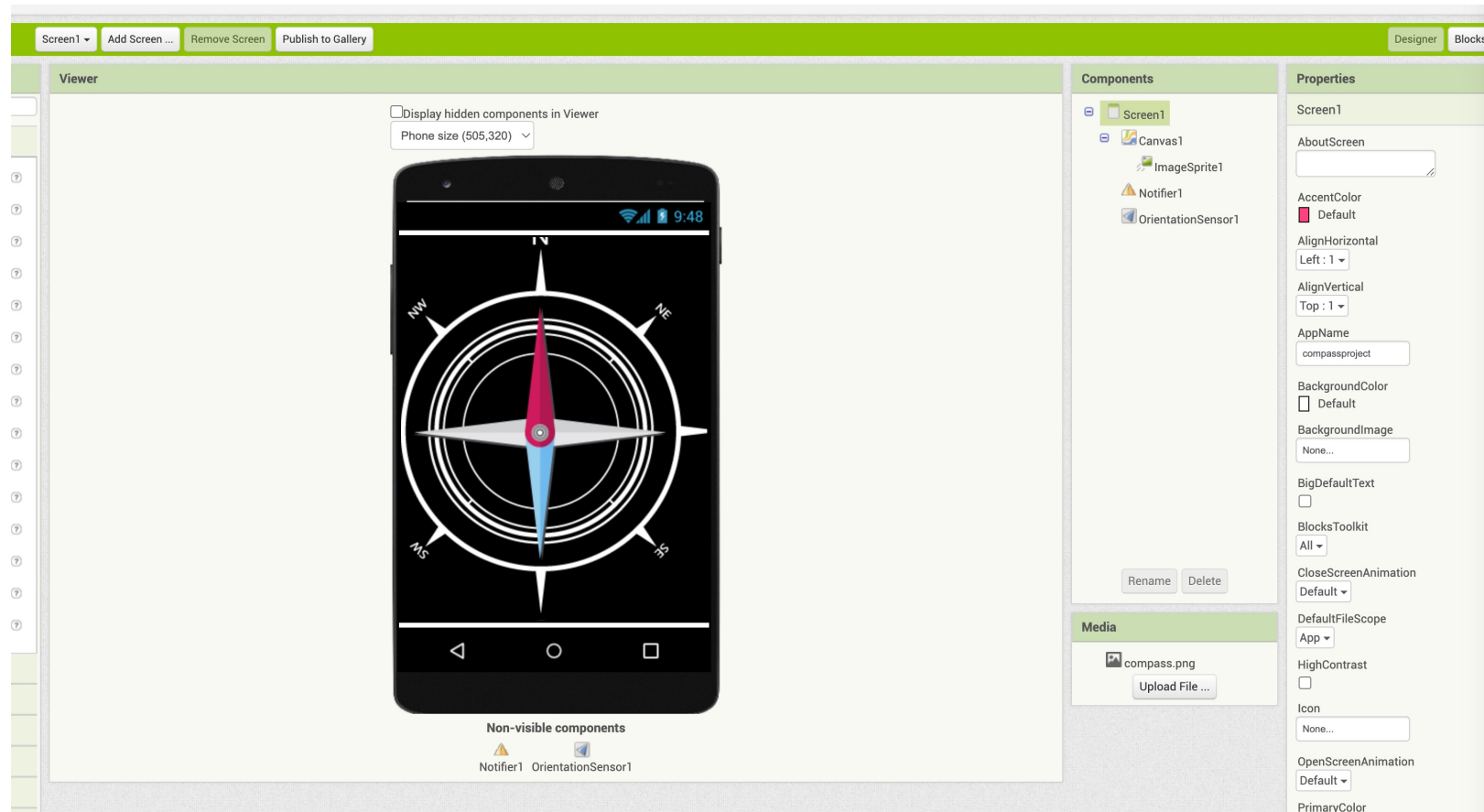
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## IMPORTANT NOTES

- 1- Our final exam will be take home exam, and please refer to itslearning platform for your project2 descriptions.
- 2- Our makeup course hour will be next week on 19<sup>th</sup> of May at 12:00 via Teams again.
- 3- Today we will go through with MIT AP INVENTOR again and on Friday we will pass to flutter

**OUR COURSE WILL START AT 10:00, PLEASE BE READY**  
**I am waiting for the participants to join**

# Compass project



# Compass block codes

The image shows a Scratch-like block code editor for a compass application. The interface includes a top bar with 'Screen1', 'Add Screen ...', 'Remove Screen', and 'Publish to Gallery' buttons, and a 'Designer'/'Blocks' toggle. The main workspace is labeled 'Viewer' and contains two block scripts. The first script, triggered by 'when Screen1.Initialize', sets the width and height of 'ImageSprite1' to match 'Canvas1', moves it to the center using calculated x and y coordinates, and checks if the 'OrientationSensor1' is available. If not, it shows an alert. The second script, triggered by 'when OrientationSensor1.OrientationChanged', updates the 'Heading' of 'ImageSprite1' to the current 'azimuth' value. A bottom status bar shows two indicators: a yellow triangle with '0' and a red 'X' with '0'. A toolbar on the right includes a target icon, zoom in (+) and zoom out (-) buttons, and a trash can icon.

```
when Screen1.Initialize
do
  set ImageSprite1 . Width to Canvas1 . Width
  set ImageSprite1 . Height to Canvas1 . Height
  call ImageSprite1 . MoveTo
    x (Canvas1 . Width - ImageSprite1 . Width) / 2
    y (Canvas1 . Height - ImageSprite1 . Height) / 2
  if not OrientationSensor1 . Available
  then call Notifier1 . ShowAlert
    notice "I could not access your mobile phone's orientati..."

when OrientationSensor1.OrientationChanged
  azimuth pitch roll
do set ImageSprite1 . Heading to get azimuth
```

Space War project

Projects

Connect

Build

Settings

Help

My Projects

View Trash

Guide

report an Issue

English

mustafacoskun@hotmail.com

spcewar

Screen1

Add Screen ...

Remove Screen

Publish to Gallery

Designer

Blocks

Search Components...

User Interface

Layout

Media

Drawing and Animation

Maps

Charts

Sensors

AccelerometerSensor

BarcodeScanner

Barometer

Clock

GyroscopeSensor

Hygrometer

LightSensor

LocationSensor

MagneticFieldSensor

NearField

OrientationSensor

Pedometer

ProximitySensor

Thermometer

Viewer

Display hidden components in Viewer

Phone size (505,320)

Non-visible components

Components

Screen1

Canvas1

Rocket

Bullet

Saucer

HorizontalArrangement1

ScoreText

ScoreNumber

Clock1

Rename

Delete

Media

shipspacev.png

spaceship.gif

space.gif

Upload File ...

Properties

Canvas1

BackgroundColor

Default

BackgroundImage

space.gif...

ExtendMovesOutsideCanvas

FontSize

14.0

Height

Fill parent...

Width

Fill parent...

LineWidth

2.0

PaintColor

Default

TapThreshold

15

TextAlignment

center : 1

Visible

☒

Screen1 ▾ Add Screen ... Remove Screen Publish to Gallery

Viewer

when Rocket ▾ .Touched

x y

do

set Bullet ▾ . Visible ▾ to true ▾

set Bullet ▾ . Speed ▾ to 20

set Bullet ▾ . Heading ▾ to 90

call Bullet ▾ .MoveTo

x

Rocket ▾ . X ▾ + Rocket ▾ . Width ▾ / 2

y

Rocket ▾ . Y ▾ - 20

when Bullet ▾ .EdgeReached

edge

do

set Bullet ▾ . Visible ▾ to false ▾

when Clock1 ▾ .Timer

do

set Saucer ▾ . X ▾ to random integer from 0 to Canvas1 ▾ . Width ▾ - Saucer ▾ . Width ▾

when Bullet ▾ .CollidedWith

other

do

set Bullet ▾ . Visible ▾ to false ▾

set ScoreNumber ▾ . Text ▾ to 

ScoreNumber ▾ . Text ▾ + 1

set Saucer ▾ . X ▾ to random integer from 0 to Canvas1 ▾ . Width ▾ - Saucer ▾ . Width ▾

when Rocket ▾ .Dragged

startX startY prevX prevY currentX currentY

do

set Rocket ▾ . X ▾ to get currentX ▾

when Screen1 ▾ .Initialize

do

set Bullet ▾ . Visible ▾ to false ▾