

Coding and Innovation



complex programming language, various animation and games

5-7 Tahun

ScratchJr Builder

Learn Icon-Block Programming, Build your own animation & game with ScratchJr

Story Animations Concepts Learned:

Planet Liberi

Interactive Projects (A) Concepts Learned: √ Messages √ Start on Tap Planet Thesaurus Simple Mech. Games Concepts Learned: / Single Button √ Timer Planet Hēros

Complex Mech. Games Concepts Learned:

√ Interactions √ Score System Planet Terra

7-12 **Tahun**

Scratch Maker

Learn Visual Programming, Make various 2D animation & game with Scratch

Robotic Inventor

Learn Science, Tech, Engineering, Art, Math,

Interactive Stories Concepts Learned: √ Sequence √ Sprite Clicked √ Go-to & Glide √ Sound **Planet Liberi**

Key-Controlled Games Concepts Learned: √ Movements √ Variables √ Conditionals √ Clones Planet Saùde

Complex Move Games Concepts Learned: √ Key-press √ Bouncing Planet Retro

Mouse-Controlled Games Concepts Learned: √ Adv. Clones √ Score System **Planet Terra**

Advanced Mouse Controlled Games Concepts Learned:

Planet Artes

Advanced Games

Concepts Learned: Ending Pages √ My Blocks Planet Inventio

10-15 Tahun

Roblox Creator

Learn Text Programming, Create 3D game & animation with Roblox

3D World Environment Concepts Learned: √ Parts/Physics √ Lighting Planet Iris

Musical Environment Concepts Learned: √ Environment √ User Interface

√ Sound & Music Planet Cantio Mechanical Games

Concepts Learned: √ Events √ Physics √ Conditiona √ Functions Structures Planet Koda

Multiplayer Games

Concepts Learned: / Remote Events √ Client & Server **Planet Multum**

Modular Games

Concepts Learned: Planet Natura

Monetization Games

Concepts Learned: / Game Loop √ Object-Oriented √ Monetization Programming



Tinkercad Designer

Learn Science, Tech, Engineering, Art, Math, Design 3D objects with Tinkercad

Shapes Exploration Concepts Learned: √ Horizontal √ Shapes √ Resizing √ Placing Planet Figura

Simple 3D Design Concepts Learned: √ Parts of a Movement √ Family / Simple Planet Familia

Complex 3D Design Concepts Learned: √ Precision Introduction √ Complex 3D **Planet Aria** object (Diorama) **Detailed 3D Object Printing** Concepts Learned: √3D print √ Space in shape √ Detailed Transportation **Planet Vectura**

Invent your own Robot **Electronic Circuits** Concepts Learned: √ Components √ Open / Close Planet Elektra **Moving Machines** Concepts Learned:

√ Prototyping Parallel Circuits Planet Vectio

Light & Sound Controller Concepts Learned: √ Intro to √ Buttons, **Planet Lumina** Sensor-Controlled Proj. Concepts Learned: Components Planet Destro √ Accelerometer Servo-Controlled Proj. Concepts Learned: √ Servo Motors √ Electric √ Pins & Circuits Currents Planet Rota

Ultrasonic Sensor Proj. Concepts Learned: / Introduction √ Functional to Phyton Projects **Planet Notios**

IoT Developer

Learn Science, Tech, Engineering, Art, Math, Develop your own Internet of Things (IoT)

Developing Soon







Note:

1 Level terdiri dari 12 kali pertemuan (tiap pertemuan selama 1 jam)

Engineering, Art, Math, ogramming project

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