BASIC LEVEL OF SCRATCH

1. **Draw a Simple Line.**
   - Click on Control block -> Drag the block 'When Green flag Clicked' on stage.
   - Click on Motion block -> Drag the block 'Move 10 steps' on stage.
   - Click on Pen block -> Drag the block 'Pen down' on stage.

2. **Draw Basic Shapes :**
   a. Circle
      - Click on Control block -> Drag the block 'When Green flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 20 steps' on stage.
      - Click on Motion block -> Drag the block 'Turn right 15 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
   b. Square
      - Click on Control block -> Drag the block 'When Green flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 100 steps' on stage.
      - Click on Motion block -> Drag the block 'Turn right 90 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
   c. Triangle
      - Click on Control block -> Drag the block 'When Green flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 100 steps' on stage.
      - Click on Motion block -> Drag the block 'Turn right 120 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
   d. Star
      - Click on Control block -> Drag the block 'When Green flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 100 steps' on stage.
      - Click on Motion block -> Drag the block 'Turn right 145 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
   e. Pentagon
      - Click on Control block -> Drag the block 'When Green flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 100 steps' on stage.
      - Click on Motion block -> Drag the block 'Turn right 72 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
   f. Hexagon
      - Click on Control block -> Drag the block 'When Green flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 100 steps' on stage.
      - Click on Motion block -> Drag the block 'Turn right 60 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.

3. **Draw shapes with different color and different shade :-**
   a. <u>Circle</u>
      - Click on Control block -> Drag the block 'When green Flag clicked' on stage..
      - Click on Motion block -> Drag the block 'Move 20 Steps' on stage.
      - Click on Motion block -> Drag the block 'turn right 15 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
      - Click on Pen block -> Drag the block ' Set pen size 10' on stage.
      - Click on Pen block -> Drag the block 'change pen shade by 20' on stage.
   b. <u>Rectangle</u>
      - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
      - Click on Motion block -> Drag the block 'Move 100 Steps' on stage.
      - Click on Motion block -> Drag the block 'turn right 90 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
      - Click on Motion block -> Drag the block 'Move 100 Steps' on stage.
      - Click on Motion block -> Drag the block 'turn right 90 degree' on stage.
      - Click on Pen block -> Drag the block 'Pen down' on stage.
      - Click on Pen block -> Drag the block 'Set pen size 10' on stage.
      - Click on Pen block -> Drag the block 'change pen shade by 20' on stage.

4. **Duplication of a Sprite.**
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Pen block -> Drag the block 'Stamp' on stage.
   - Click on Motion block -> Drag the block 'Move 20 Steps' on stage.
   - Click on Pen block -> Drag the block 'Pen down' on stage.
   - Click on Pen block -> Drag the block 'Set pen size 1' on stage.
   - Click on Motion block -> Drag the block 'If an Edge bounce' on stage.

5. **Repetition of a Sprite.**
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Control block-> Drag the block 'Repeat 20' on stage.
   - Click on Motion block -> Drag the block 'Move 20 Steps' inside Repeat block on stage.
   - Click on Motion block -> Drag the block 'turn right 15 degree' inside Repeat block.
   - Click on Pen block -> Drag the block 'Stamp' inside Repeat block on stage.

6. **Changing color of a sprite with Repeat.**
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Control block-> Drag the block 'Repeat 30' on stage.
   - Click on Motion block -> Drag the block 'Move 10 Steps' inside Repeat block on stage.
   - Click on Control block-> Drag the block 'wait 1 seconds' inside Repeat block on stage.
   - Click on Looks block -> Drag the block 'Change color effect by 20' inside Repeat block.
   - Click on Looks block -> Drag the block 'next costume' inside Repeat block on stage.

7. **Make a new sprite and hide/show a sprite.**
   - Select 'choose a sprite' option from below the stage area.
   - Select anyone new sprite from it.
   - Delete old sprite by clicking dustbin on it.
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Control block-> Drag the block 'Repeat 20' on stage.
   - Click on Control block-> Drag the block 'wait 3 seconds' inside Repeat block on stage.
   - Click on Motion block -> Drag the block 'Move 10 Steps' inside Repeat block on stage.
   - Click on Looks block -> Drag the block 'hide' inside Repeat block.
   - Click on Control block-> Drag the block 'wait 3 seconds' inside Repeat block on stage.
   - Click on Looks block -> Drag the block 'show' inside Repeat block.

8. **Change pen colour, shade and pen size.**
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Control block-> Drag the block 'Repeat 10' on stage.
   - Click on Pen block -> Drag 'change pen shade 20' inside Repeat block on stage.
   - Click on Pen block -> Drag 'set pen color 10' inside Repeat block on stage.
   - Click on Pen block -> Drag 'set pen size 20' inside Repeat block on stage.
   - Click on Pen block -> Drag 'pen down' inside Repeat block on stage.
   - Click on Motion block -> Drag the block 'Move 5 Steps' inside Repeat block on stage.

9. **Display a message by Sprite with background.**
   - Click on 'Choose a backdrop' icon from right bottom side.
   - Select any required backdrop.
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Looks block-> Drag the block 'Say "Hello" for 2 seconds' on stage.

10. **Project : To walk a man and say "Hello" with Background**
   - Click on 'Choose a backdrop' icon from right bottom side.
   - Select any required backdrop.
   - Select 'choose a sprite' option from below the stage area.
   - Select anyone new sprite (Man) from it.
   - Delete old sprite by clicking dustbin on it.
   - Click on Control block -> Drag the block 'When green Flag clicked' on stage.
   - Click on Control block-> Drag the block 'Repeat 10' on stage.
   - Click on Motion block -> Drag the block 'Move 10 Steps' inside Repeat block on stage.
   - Click on Looks block -> Drag the block 'next costume' inside Repeat block on stage
   - Click on Looks block-> Drag the block 'Say "Hello" for 2 seconds' inside Repeat block.

11. To add sound on sprite with background.
- Click on 'Choose a backdrop' icon from right bottom side.
- Select any required backdrop.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Looks block ->Drag the block ' play sound Meow until done'.

12. Replace a new sprite(Dog) and apply sound to it with background.
- Click on 'Choose a backdrop' icon from right bottom side.
- Select any required backdrop.
- Select 'choose a sprite' option from below the stage area.
- Select anyone new sprite (Dog) from it.
- Delete old sprite by clicking dustbin on it.
- Click on 'Sounds' tab which place on the top of the Scripts Area.
- Choose a Sound from left bottom side of Scripts Area.
- Choose a 'Dog1' sound from Sound box.
- Click on 'Code' tab which place on the top of the Scripts Area.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block -> Drag 'repeat 20' on stage.
- Click on Motion block -> Drag the block 'Move 20 Steps' inside Repeat block on stage.
- Click on Looks block -> Drag the block 'next costume' inside Repeat block on stage
- Click on Looks block -> Drag the block 'play sound Dog1 until done' inside Repeat block.

13. To record a new sound.
- Select 'choose a sprite' option from below the stage area.
- Select anyone new sprite (Girl) from it.
- Delete old sprite by clicking dustbin on it.
- Click on 'Sounds' tab which place on the top of the Scripts Area.
- Choose a Record option from left bottom side of Scripts Area.
- To record any sound click on Record button.
- After record a sound click on Stop button.
- Click on 'Save' button and save this sound.
- Click on 'Code' tab which place on the top of the Scripts Area.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Looks block -> Drag the block 'play sound pop until done'.
- Click on pop and select your recorded sound.

14. **To Work with two different Sprites.**

Sprite 1 :
- Select 'choose a sprite' option from below the stage area.
- Select anyone new sprite (Man) from it.
- Delete old sprite by clicking dustbin on it.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block-> Drag the block 'wait 5 seconds' on stage.
- Click on Looks block-> Drag the block 'Say "Hello" for 2 seconds' on stage.
- Click on Control block-> Drag the block 'wait 5 seconds' on stage.
- Click on Looks block-> Drag the block 'Say "What are you Doing ?" for 2 seconds' on stage.

Sprite 2 :
- Select 'choose a sprite' option from below the stage area.
- Select anyone new sprite (Dance Tiger) from it.
- Delete old sprite by clicking dustbin on it.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block-> Drag the block 'wait 5 seconds' on stage.
- Click on Looks block-> Drag the block 'Say "Hi" for 2 seconds' on stage.
- Click on Control block-> Drag the block 'wait 5 seconds' on stage.
- Click on Looks block-> Drag the block 'Say "I am Dancing ." for 2 seconds' on stage.

15. **Setting the Sprite Position**
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block-> Drag the block 'Forever' on stage.
- Click on Motion block -> Drag the block 'Move -50 Steps' inside Forever block on stage.
- Click on Control block-> Drag the block 'wait 1 seconds' inside Forever block on stage.
- Click on Motion block -> Drag the block 'Set X to 100' inside Forever block on stage.
- Click on Control block-> Drag the block 'wait 1 seconds' inside Forever block on stage.
- Click on Looks block-> Drag the block 'Change size by 5'inside Forever block on stage.
- Click on Looks block-> Drag the block 'Change color effect by2 5'inside Forever block on stage.

16. Gliding a Sprite
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block-> Drag the block 'Forever' on stage.
- Click on Motion block -> Drag the block 'change X by 100' inside Forever block on stage.
- Click on Motion block -> Drag the block 'glide 5 seconds to x: 0 y: 110' inside Forever block on stage.
- Click on Motion block -> Drag the block 'turn right 15 degree' inside Forever block on stage.
- Click on Control block-> Drag the block 'wait 1 seconds' inside Forever block on stage.
- Click on Motion block -> Drag the block 'change Y by 100' inside Forever block on stage.
- Click on Motion block -> Drag the block 'glide 5 seconds to x: 110 y: 0' inside Forever block on stage.
- Click on Motion block -> Drag the block 'turn right 15 degree' inside Forever block on stage.

17. Graphics Effects on Sprite
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Looks block -> Drag the block 'Change size by 20' on stage.
- Click on Control block -> Drag the block 'Wait 1 sec' on stage.
- Click on Looks block -> Drag the block 'Change color effect by 25' on stage.
- Click on Color and select anyone effect from the dropdown menu (Like mosaic).
- Click on Control block -> Drag the block 'wait 1 sec' on stage.
- Click on Looks block -> Drag the block 'Change color effect by 25' on stage.
- Click on Color and select anyone effect from the dropdown menu (Like pixelate).
- You can take different effect after every second.

18. Bounce a ball.
- Click on 'Choose a backdrop' icon from right bottom side.
- Select any required backdrop.
- Select 'choose a sprite' option from below the stage area.
- Select anyone new sprite (Ball) from it.
- Delete old sprite by clicking dustbin on it.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Motion block -> Drag the block 'move 10 Steps ' on stage.
- Click on Motion block -> Drag the block 'turn right 15 degrees' on stage.
- Click on Operators block-> Drag the block 'Pick random 1 to 10' on '15 degrees'.
- Change the values 40 to 90 instead of 1 to 10.
- Click on Control block -> Drag the block 'forever' on stage.
- Click on Motion block-> Drag the block 'if an edge bounce' inside the 'forever' block.
- Click on Motion block -> Drag the block 'move 10 Steps ' inside the 'forever' block.

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19. Project : Make two persons and walk in desert.
- Click on 'Choose a backdrop' icon from right bottom side.
- Select Desert backdrop.
- Select 'choose a sprite' option from below the stage area.
- Select anyone new sprite (Man) from it.
- Repeat above two steps and take another sprite as Pico.
- Delete old sprite by clicking dustbin which placed on it.
- Click on First sprite (Man) from the right bottom side of Scripts Area.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block -> Drag the 'Repeat 10' on stage.
- Click on Motion block -> Drag the block 'move 10 Steps ' inside the Repeat on stage.
- Click on Control block -> Drag the block 'wait 1 sec' inside the Repeat on stage.
- Click on Looks block ->Drag the block 'next costume' inside the Repeat on stage.
- Do these above all same steps on Pico sprite.

20. Paint a new background and do sunrise.
- Click on 'Choose a backdrop' icon from right bottom side.
- Click on Paint tool.
- Draw Natural Scenery by given paint tools and change colour.
- Click on choose a sprite tool from bottom side scripts area.
- Click on Paint tool.
- Draw Circle as a sun by given paint tools.
- Click on code left top side.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Motion block -> Drag the block 'turn left 15 degree' on stage.
- Click on Motion block -> Drag the block 'move 500 Steps ' on stage.

21. Import a readymade image as background.
- Click on 'Choose a backdrop' icon from right bottom side.
- Click on upload backdrop tool.
- Browse any image and click on open.

22. To switch backgrounds.

- Click on 'Choose a backdrop' icon from right bottom side.
- Click on Stage tool.
- Now click on 'Backdrops' tab.
- Select 'Choose a Backdrop' from left bottom side.
- Choose different 3-4 backgrounds.
- Select current sprite from right bottom side of Scripts Area.
- Click on 'Code' tab.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block -> Drag the block 'Forever' on stage.
- Click on Looks Block -> Drag 'next backdrop' inside the Forever block.
- Click on Control block -> Drag the block 'wait 2 sec' inside the Forever on stage.

23. Playing Instruments

- Click on 'Choose a backdrop' icon from right bottom side.
- Select any musical background.
- Click on 'Choose a Sprite' and take another sprite. (Dancer)
- Delete old sprite.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block -> Drag the block 'forever' on stage.
- Click on Looks block -> Drag the block 'next costume' inside the Forever.
- Click on Control block -> Drag the block 'wait 1 sec' inside forever.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block -> Drag the block 'forever' on stage.
- Click on Sound block -> Drag the block 'play sound dance around until done' inside forever.

> Import a sound as well as record your own sound by using 'Sounds' tab.

24. To edit or modify an existing project.

- Open your saved file by File -> Open
- If you want to change/add sprite, click on 'Choose a Sprite' at bottom side of Screen..
- Click on 'Paint tool'. Select any sprite.
- To add or change any backdrop click on 'Choose a backdrop' at bottom side of Screen.
- Click on 'Paint' tool and do drawing on existing backdrop.

25. Create a butterfly with different colours.

- Click on 'Choose a Sprite' and take another sprite. (Butterfly)
- Delete old sprite.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Pen block -> Drag the block 'Stamp' on stage.
- Click on Motion block -> Drag the block 'Move 100 steps' on stage.
- Click on Looks block -> Drag the block 'change color effect by 25' on stage.
- Click on Pen block -> Drag the block 'Stamp' on stage.
- Click on Motion block -> Drag the block 'Move 100 steps' on stage.
- Click on Looks block -> Drag the block 'change color effect by 25' on stage.
  Or
- Click on 'Choose a Sprite' and take another sprite. (Butterfly)
- Delete old sprite.
- Click on Control block -> Drag the block 'When green Flag clicked' on stage.
- Click on Control block -> Drag the block 'repeat 10' and change 5 instead of 10.
- Click on Pen block -> Drag the block 'Stamp' inside repeat block.
- Click on Motion block -> Drag the block 'Move 100 steps' inside repeat block on stage.
- Click on Looks block -> Drag the block 'change color effect by 25' inside repeat block.