



SCRATCH

programming

&

C

Programming



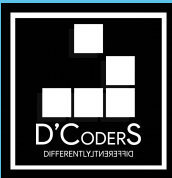
Go from Scratch to C

AC LAB | 6:15 PM
24th & 25th Sept (Scratch Prog.)
26th & 27th Sept (C Prog.)

Simple coding for absolute beginners

Know more at : www.dcoders.org

IGNITE YOUR INNER GEEK



TODAY'S SESSION



**Intro to
D'CoderS**

**Intro to
Scratch**

What is

D'CodersS ?

- **First coding club of SMIT**
- **Founded by Rishav Bhaiya in 2016**
- **Conducted C, C++, Web Dev workshops, etc**
- **Organized Mozilla Workshop**

Why
D'Coders ?

- **Increase student's interest in coding**
- **Introduce you to different branches of C.Sc.**
- **Provide technical support**
- **Relieve you from your monotonous
classroom syllabus**

Our

Plan ?

- **Scratch workshop**
- **Python workshop**
- **Web Development Workshop**
- **Weekly Coding Battles**
- **Classroom Sessions**
- **Hackathon**

Why
Code ?

Our

Projects ?

GPA Calculator

Web Dev & Python (gpacalc.rishavanand.com)

GPA Calculator

GPA EstimatorSource Code

April/May 2018 Semester Examination

201600271

Calculate

Your result:

Subject	Grade
DATABASE MANAGEMENT SYSTEMS	S
DESIGN & ANALYSIS OF ALGORITHMS	S
ADVANCED COMPUTER ORGANIZATION & ARCHITECTURE	S
PRINCIPLE OF PROGRAMMING LANGUAGE	S
JAVA PROGRAMMING (ELECTIVE I)	S
DATABASE MANAGEMENT SYSTEMS LAB	S
ADVANCED PROGRAMMING LAB	S
ALGORITHM LAB	S
ENGINEERING MATHEMATICS IV	S

Your GPA is : 10

Note : Clicking on  will remove a subject from GPA calculation. Incase you want to prevent a subject from being added to you GPA this will come in handy.

Simple apps by Rohan Prasad & Rishav Anand
(We don't own the data used)

CS1421: JAVA PROGRAMMING (ELECTIVE I)

SIKKIM MANIPAL UNIVERSITY

GRADE SHEET - APRIL/MAY 2018 EXAMINATIONS.

Subject Code : CS1421

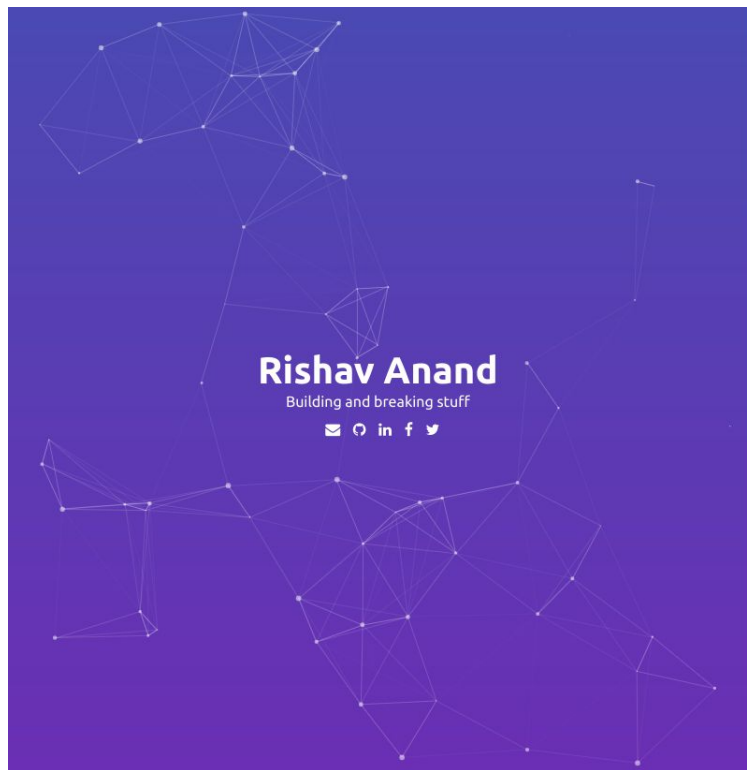
Subject Title : JAVA PROGRAMMING (ELECTIVE I)

U n i t C r e d i t : 4.0

REGNO	INT	UM	TOT	GRADE
201500058	24.40	15	40.00	E
201500087	11.40	11	23.00	F
201500258	24.95	35.5	61.00	C
201500320	11.00	19.5	31.00	F
201500866	0.00	DT	0.00	DT
201600008	30.75	34.5	66.00	C
201600009	21.40	13	35.00	E
201600014	18.35	25	44.00	E
201600015	37.80	43	81.00	A
201600018	28.95	42.5	72.00	B
201600022	43.00	43.5	87.00	A
201600023	23.65	24.5	49.00	D
201600026	34.30	31	66.00	C
201600027	38.40	41	80.00	A
201600028	32.95	40	73.00	B
201600029	13.00	2.5	16.00	F
201600030	43.15	42.5	86.00	A
201600032	20.90	11	32.00	F
201600037	43.20	44.5	88.00	A
201600039	18.75	13	32.00	F
201600040	23.80	16.5	41.00	E
201600043	32.80	39.5	73.00	B
201600044	10.80	3	14.00	F
201600045	30.55	29.5	61.00	C
201600048	35.80	34.5	71.00	B
201600049	15.00	13	28.00	F
201600050	29.45	23	53.00	D
201600052	43.80	47	91.00	S
201600054	45.50	42	88.00	A
201600055	22.20	17	40.00	E
201600056	32.50	34.5	67.00	B
201600057	22.40	23.5	46.00	D
201600059	37.95	45	83.00	A
201600060	28.30	27.5	56.00	D
201600062	22.35	27	50.00	D
201600063	43.20	47	91.00	S
201600066	40.35	41.5	82.00	A
201600070	21.70	14.5	37.00	E
201600075	28.40	16	45.00	E
201600076	36.30	44.5	81.00	A
201600081	23.05	42.5	66.00	C
201600086	27.60	26	54.00	D
201600087	27.15	13	41.00	E
201600089	27.90	18	46.00	D
201600091	35.40	46	82.00	A
201600093	26.80	27.5	55.00	D
201600095	25.60	31	57.00	C

Personal Website

Web Dev (www.rishavanand.com)



ABOUT ME

I'm currently an undergraduate, studying Computer Science at Sikkim Manipal Institute of Technology. Outside academics, I'm a Freelance Web Developer and this comes from my passion for building stuff. Currently I'm exploring the field of Machine Learning and hope to create apps that combine power of both worlds.

EDUCATION

Higher Education

Sikkim Manipal Institute of Technology, Sikkim
Bachelor of Technology in Computer Science
2016 - present

Secondary Education

Delhi Public School, Patna
2007 - 2016

Primary Education

Bethany School, Darjeeling
2003 - 2007

WORK

Department Representative

Dept. of Computer Science Engineering, SMIT
Jan 2017 - Dec 2017

Product Development Intern

Hasura Technologies Pvt. Ltd.
Jun 2017 - Jul 2017

PROJECTS

BidFarm

Personal Website

Web Dev (www.rohanprasad.com)



DominoPy

Python (<https://github.com/rishavanand/dominopy>)

The screenshot shows the GitHub repository page for `rishavanand / dominopy`. The repository is described as a "Python wrapper for Dominos India API". It has 10 commits, 1 branch, 0 releases, and 1 contributor. The commit history shows the following:

Commit	Message	Time
<code>dominopy</code>	implemented new session for each order	20 days ago
<code>.gitignore</code>	added package structure	24 days ago
<code>README.md</code>	Create README.md	24 days ago
<code>test.py</code>	tabulated display of orders and added function to remove items from o...	21 days ago

The `README.md` file content is as follows:

```
dominopy

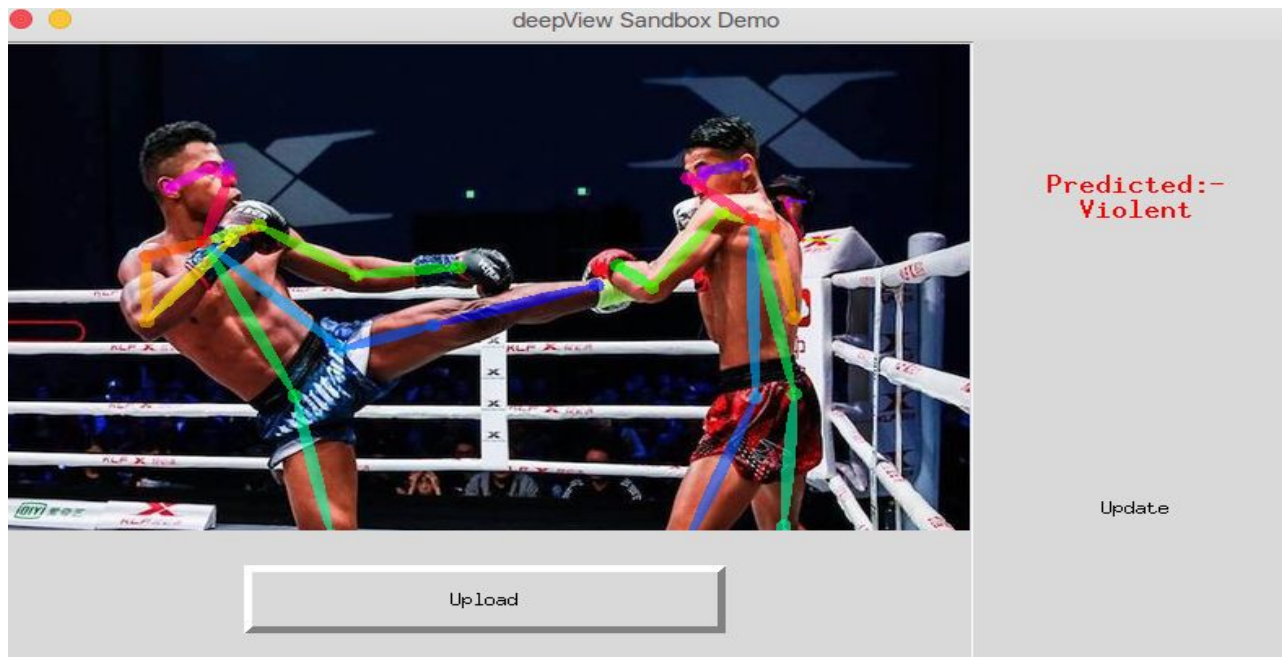
Python3 wrapper for Dominos India API

[WORK IN PROGRESS]
```


DeepView

Convolutional neural networks

(<https://github.com/rishavr/deepview>)



Plant Species Recognition

Convolutional neural networks

(https://github.com/immanuelsavio/Plant_Species_Recognition_With_VGG16)

The screenshot shows the GitHub interface for the repository 'Plant_Species_Recognition_With_VGG16' by user 'immanuelsavio'. The repository has 1 watch, 2 stars, and 1 fork. It contains 24 commits, 1 branch, and 0 releases. The latest commit, 'eb9ea87', was made on 26 Jul. The commit history table lists the following changes:

File	Description	Time
conf_vgg16	Added the required config json codes	2 months ago
output	readme for the output files	2 months ago
.gitignore	Initial commit	2 months ago
LICENSE	Update LICENSE	2 months ago
README.md	Update README.md	2 months ago
extract.py	changed the format and extracting function	2 months ago
keras.json	Keras.json file is uploaded for keras to run in tensorflow backend.	2 months ago
leaf_LR.py	Update leaf_LR.py	2 months ago

The README.md file is titled 'Plant Species Recognition With VGG16' and contains the following text:

This project deals with identification of different species of plant by processing their leaves. The dataset is a collection of 4 available datasets namely Pavia, Pavia, Gerdish and 130Flora. This dataset also contains some more self-made dataset of 4

Username : TNP

Password : smit1234

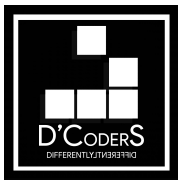
<https://scratch.mit.edu>

How many from section H?

Join our whatsapp group

www.dcoders.org/join

Having difficulties
to understand
programming
fundamentals?



What is Scratch ?

A Typical C Code

```
#include<stdio.h>

int main()
{
    printf("Hello Geeks - DCoder's");
    return 0;
}
```



A Scratch Block



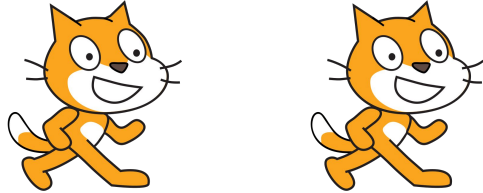
What can we do with Scratch ?

Scratch

Concepts

Sprites

- Every object is a sprite



- Sprites have :
 - Scripts (behaviour)
 - Costumes (appearance)

Stage

- Location where sprites are placed
- Instead of costumes it has backdrops

Entry points

- Initiates scripts



- Also used for running parallel scripts

Action Statements

- Actions for sprites

play sound meow ▾

move 10 steps

set score ▾ to 20

change size by 10

set pen color to 

Booleans

- Are statements that are TRUE / FALSE



Conditions

- Blocks that use output of booleans



Loops

- Are used to repeat statements



when  clicked

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

move 10 steps

say Hello! for 2 secs

when  clicked

repeat 10

move 10 steps

say Hello! for 2 secs

Variables

- Are container for values



set text ▼ to "Hello, World!"

A Scratch 'set' block, which is orange and has a notch on its top-left corner. It contains the word 'set', a dropdown menu showing 'text', the word 'to', and a text input field containing the string 'Hello, World!'.



change counter ▼ by 3

A Scratch 'change' block, which is orange and has a notch on its top-left corner. It contains the word 'change', a dropdown menu showing 'counter', the word 'by', and a numeric input field containing the value 3.



counter < 0

A Scratch 'if' block, which is green and has a pointed right side. It contains the word 'counter', a less-than sign '<', and a numeric input field containing the value 0.

Scope

- Who can access those variable?
 - Local (only one sprite)
 - Global (stage + all sprites)

Threads

- Are simultaneous processes



WELCOME TO DAY 2

Revision

Concepts

What are sprites?

What are entry points?

What are booleans?

What are loops?