

1.1.3 - List of Activities for Courses having focus on employability/ entrepreneurship/ skill development offered by the institution during the last five years

Sr. No.	Name of the Course	Course Code
	MSC	
1	Cloud computing	MSE21905
2	Practical paper based on Software Architecture and Design Pattern, Machine Learning & Web Frameworks	MS32004
	MCOM	
3	Introduction to Behavioural Finance	MCM32004
4	Capital Markets and Financial Services	MCM42001
5	Project Work (Business Administration)	MCM42004
6	Project Work (Accountancy)	MCM42006
	MA ECONOMICS	
7	Research Project	MEC42003
	FYBCOM	
8	Compulsory English	AC#12001
9	Compulsory English	AC#22001
10	Business Mathematics and Statistics	AC12001
11	Business Mathematics and Statistics	AC22001
12	Consumer Protection & Business Ethics	C12006
13	Consumer Protection & Business Ethics	C22006
14	Business Administration	AC12008
15	Business Administration	AC22008
	SYBCOM	
16	Business Administration – I	C31608
17	Business Administration – I	C41608
	TYBCOM	
18	Business Administration - II	C51708
19	Business Administration - II	C61708
20	Marketing - III	C51713
21	Marketing - III	C61713
	FYBA	
22	Comp. English EM	A12001
23	Optional English	A12005
24	Optional English	A22005
	SYBA	
25	Comp English-EM	A31601
26	Comp English-EM	A41602
27	Comp English-MM	A31602
28	Comp English-MM	A41602
29	English-1	A31614
30	English-2	A41614
	TYBA	
31	Comp English EM	A51701
32	Comp English EM	A61701
33	Comp English MM	A51702
34	Comp English MM	A61702
35	Sociology Special-3	A51712
36	English-3	A51715
37	English-4	A61715
38	English -4	A51716
39	English -5	A61716
40	Psychology Special -3	A51718



St. Mira's College for Girls, Pune
(Autonomous-Affiliated to Savitribai Phule Pune University)

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Sr. No.	Name of the Course	Course Code
	FYBSC	
41	Discrete Mathematics	BS12003
42	Principles of Digital Electronics	BS12008
43	Electronics Practical	BSP12012
44	Graph Theory	BS22003
	SYBSC	
45	Mathematics - Numerical Analysis	BS31604
46	Mathematics - Operations Research	BS41604
47	Digital System Design	BS31605
48	PIC Microcontroller Architecture, Interfacing & Programming	BS41605
	TYBSC	
49	Operating Systems	BS61701
50	Object oriented analysis and design	BS51706
51	Advanced database management system	BS61706
52	Lab Course III	BSP61709
	FYBBA	
53	Principles of Management	BB22001
	TYBBA	
54	Entrepreneurship Development	BB51702
55	Specialisation - Finance	BB61706A
56	Specialisation - HR	BB61706B
57	Specialisation - Marketing	BB61706C
	FYBBA(CA)	
58	Business Communication Skills	BC12001
59	Principles of Management	BC12002
60	C Language	BC12003
	SYBBA(CA)	
61	Software Engineering	BC31605
62	Operating System	BC31603
	TYBBA(CA)	
63	Web technology	BC51702
64	Project	BC51706
65	Advanced Web Technology	BC61701
66	Project	BC61706

Jayab

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Principal
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Title of project - Time Series

Class - FY-B.COM

Div - 'A'

Roll no - 3104

Year - 2020 - 2021

Sub - Business Mathematics & Statistics

Semester - I

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* Time Series. *

* Definition and Terminology.

▶ Time Series — Def:—

"A Time Series Consists of data arranged chronologically" (i.e., according to time)

▶ Terminology. —

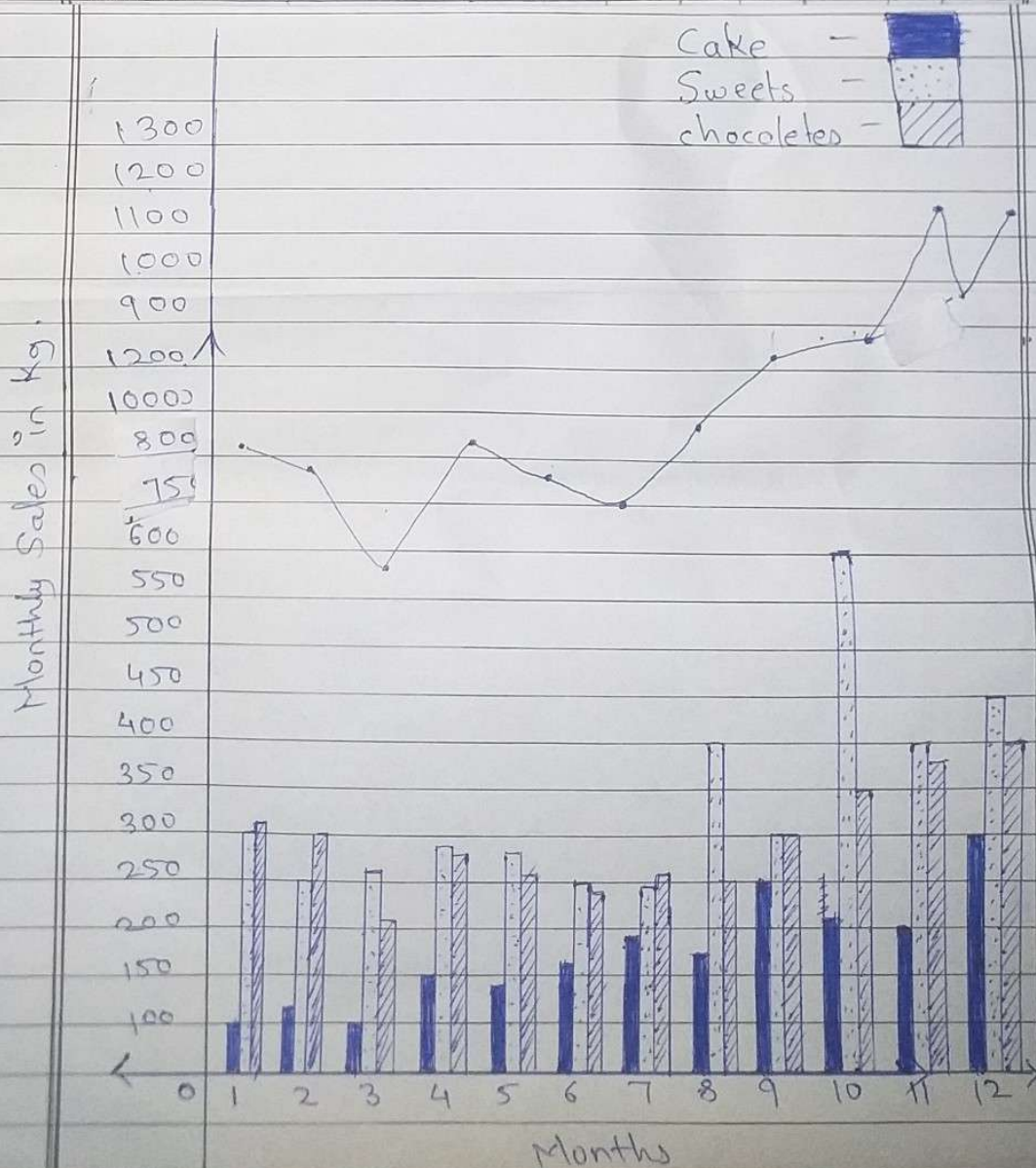
Time series are very frequently plotted via Run charts (a temporal line or Go Chart). Time series are used in statistics, signal processing, pattern recognition, econometrics, mathematical finance, weather forecasting, earthquake prediction, electroencephalography, control engineering, astronomy, communication engineering and largely in any domain of applied science and engineering which involves temporal measurements. A time series ~~is~~ data have a natural temporal ordering. This makes time series analysis distinct from cross-sectional studies, in which there is no natural ordering of the observation (e.g., explaining people's wages by reference to their respective education levels, where the individual's data could be entered in any order). Time series analysis is also distinct from spatial data analysis where the observation's typically relate to geographical locations.

Example - 1.

* Make table about annual Sales of different Sweet Shop in a Sweet Shop and fit a trend line for following data.

→ Least Square method of time Series.

Months	1	2	3	4	5	6	7	8	9	10	11	12
(in kg)												
Cake	100	120	100	150	140	160	190	170	250	210	200	300
Sweets	300	250	260	290	280	250	290	400	300	500	400	450
Chocolates	310	300	210	280	260	240	260	250	300	350	380	400
Total	710	670	570	720	680	650	740	820	850	1160	980	1150

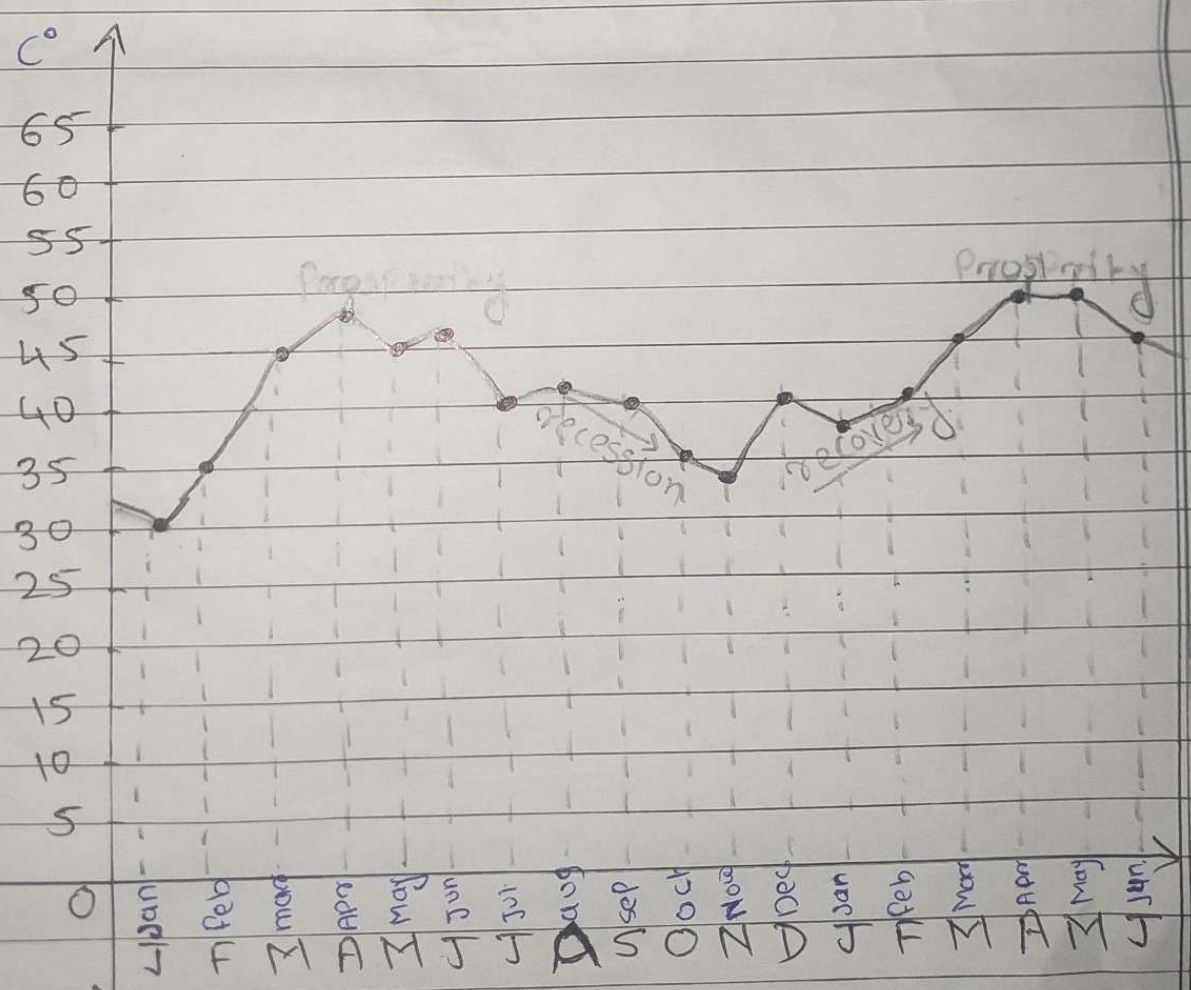


Example - 2.

* pune monthly weather average's

► Average daytime temperature The bar chart below show the average monthly peak daytime temperatures at pune.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
30	35	45	48	45	46	40	42	40	36	33	40	38	40	45	49	49	45



Average monthly temperature(°C) in pune.

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* Conclusions :—

- Time Series Clustering: work out your own distance / similarity metrics, and then use existing clustering techniques such as k-means and hierarchical clustering
- Techniques specially for classifying / clustering time series data: a lot of research publication but no R implementation. ~~As far as~~

* Bibliography :-

- weather-ind.com (pune weather averages and monthly Temperatures)
- "https://en.wikipedia.org/w/index.php?title=Time_series&oldid=993102431"
- "https://en.wikipedia.org/w/index.php?title=Time_series_database&oldid=978423477"