Name: Ayush Jain SAP ID: 60004200132

Div: B3 Sub: Business Analytics

Experiment 4

Aim: To create data by applying filters in SAS Studio and performing data analysis on it.

Theory:

The WHERE= option:

Selects observations from SAS data sets that meet a particular condition. The WHERE= option allows one to select only those observations from a SAS data set that meet a certain condition. Just as is true for the KEEP= and DROP= options, the WHERE= option can be attached to the SET statement or the DATA statement. If the WHERE= option is attached to the SET statement, SAS selects the observations that meet the condition as it reads in the data. If the WHERE= option is attached to the DATA statement, SAS selects the observations as it writes the data from the program data vector to the output data set.

The DROP= and KEEP= options:

The DROP= option tells SAS which variables you want to drop from a data set. If you place the DROP= option on the SET statement, SAS drops the specified variables when it reads the input data set. On the other hand, if you place the DROP= option on the DATA statement, SAS drops the specified variables when it writes to the output data set.

The KEEP= option tells SAS which variables you want to keep in a data set. If you place the KEEP= option on the SET statement, SAS keeps the specified variables when it reads the input data set. On the other hand, if you place the KEEP= option on the DATA statement, SAS keeps the specified variables when it writes to the output data set.

The IN= option:

The IN= option tells SAS to create an "indicator variable" that takes on either the value 0 or 1 depending on whether or not the current observation comes from the input data set. If the observation does not come from the input data set, then the indicator variable takes on the value 0. If the observation does come from the input data set, then the indicator takes on the value 1. The IN= option is especially useful when merging and concatenating data sets which we'll study in the next two lessons.

Macro Variables:

A macro variable in SAS is a string variable that allows you to dynamically modify the text in a SAS program through symbolic substitution.

PROC SORT:

The SORT procedure orders SAS data set observations by the values of one or more character or numeric variables. The SORT procedure either replaces the original data set or creates a new data set. PROC SORT produces only an output data set.

Code and Output:

Proc import datafile="/home/u63311610/COCUBES_COMPS_ATTENDANCE.xlsx" dbms=xlsx out=attendance replace; run;

proc print data=attendance; run;

Obs A	В	C	D	E	F	G	Н	1	J	K
30	CoCubes Id	Name	Test Taken	Mobile	Primary Email	Branch, Degree	Institute Name	Batch	Roll Number	Slot Time
2	3671147	Harsh Shah	No	9833914188	shahh8138@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80004200084	05/Mar/2023 10:00
3	3915565	Aadil Faisal Saudager	No	9136709861	aadisaudagar26@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80003200171	05/Mar/2020 10:00
4	3915566	Aaditya Patel	No	7039153505	petelaaditya260602@gmail.com	Computer Science Engineering, B. Tech,	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D063	05/Mar/2023 10:00
5	3915567	Aakash Bhavesh Goradia	No	9594047370	aakash7goradia@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80003200087	05/Mar/2023 10:00
6	3915568	Aaray Sharma	Yes	9086136332	aaravsharma.123123123@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200003	05/Mar/2023 10:00
7	3915569	Aaryan Kangte	Yes	7506056549	aaryanclever555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCOEM121	05/Mar/2023 10:00
8	3915570	Aayush Pravin Panchal	Yes	8451873349	aeyushpanchal658@gmail.com	Chemical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80011200058	27/Feb/2023 09:00
5	3915571	Aayushi Yagnesh Waghela	No	9137309337	awyushiwaghela3@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60003200165	05/Mar/2023 16:00
10	3915572	Aayushman Vikas Gupta	No	9820601859	guptaaayushmaan@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	60004200066	05/Mar/2023 10:00
11	3915573	Abhay Rajesh Bhosle	Yes	9820833039	abhaybhosla70@gmail.com	Electronics & TeleCommunication Engineering, 8. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60002200156	05/Mar/2023 10:00
12	3915574	Abhijit Ashok Saha	Yes	9930227290	abhijils1802@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering,	2024	60004200112	05/Mar/2023 10:00

PROC PRINT DATA=attendance; TITLE 'attendance '; WHERE J IS MISSING; RUN;

	attendance												
Obs	А	В	С	D	E	F	G	H	10	J	к		
188		3915750	Jharana Vipul Solanki	No	9920669125	solankijharana213@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi Coflege of Engineering, Mumbal	2024		05/Mar/2023 10:00		
522		3916084	Yuyraj Thakur	No	7900039523	yuvithakur7707@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024		05/Mar/2023 10:00		
526													

PROC PRINT DATA=attendance; TITLE 'attendance '; WHERE J IS NOT MISSING;

RUN;

						atter	dance				
Obe	Α	В	С	D	E	F	G	Н	-1	J	K
9		CoCubes Id	Name	Test Taken	Mobile	Primary Email	Branch, Degree	Institute Name	Batch	Roll Number	Slot Time
2		3671147	Harsh Shah	No	9833914188	shahh8138@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J, Sanghvi College of Engineering, Mumbai	2024	60004200084	05/Mar/202 10:00
3		3915565	Aadil Faisal Saudagar	No	9136709861	aadisaudagar26@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	60003200171	05/Misr/202 10:00
4		3915566	Aaditya Patel	No	7039153505	patelaaditys260602@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J, Sanghyi College of Engineering, Mumbai	2024	D053	05/Mar/202 10:00
5		3915567	Aakash Bhavesh Goradia	No	9594047370	aakash7goradia@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	60003200087	05/Mar/202 10:00
6		3915568	Aaray Shanna	Yes	9086136332	aaravsharma.123123123(@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200003	05/Mar/202 10:00
7		3915569	Aaryan Kangte	Yes	7506056549	aaryanclever555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J, Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCQEM121	05/Mar/202 10:00
6		3915570	Aayush Pravin Panchal	Yes	8451873349	aayushpanchal658@gmail.com	Chemical Engineering, B. Tech:	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	60011200058	27/Feb/202 09:00
5		3915571	Asyushi Yagnesh Waghela	No	9137309337	aayushiwaghela3@gmail.com	Information Technology, B. Tech.	Dwarkadas J, Sanghvi College of Engineering, Mumbai	2024	60003200165	05/Mar/202 10:00
10		3915572	Aayushman Vikas Gupta	No	9820601859	guptaaayushmaan@gmail.com	Camputer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200066	05/Mar/202 10:00
11		3915573	Abhay Rajesh Bhosle	Yes	9620833039	abhaybhoste70@gmail.com	Electronics & TeleCommunication Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60002200156	05/Mar/202 10:00
12		3915574	Abhiit Ashok Saha	Yes	9930227290	abhiits1802@amal.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanahvi	2024	60004200112	05/Mar/202

PROC PRINT DATA=attendance;

TITLE 'attendance';

WHERE I="2024";

BdC	Α	8	C	D	E	F	G	Н	1	J	Ж
2		3671147	Harsh Shah	No	9833914188	shahh6138@gmail.com	Computer Engineering, B. Tech.	Dwarkedas J. Sanghvi College of Engineering, Mumbai	2024	60004200084	05/Mar/2023 10:00
3		3915565	Aadil Faisal Saudagar	No	9138709861	aadilsaudager26@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2624	80003200171	05/Mar/2023 10:00
4		3915566	Aaditya Patel	Np	7039153505	patelaaditya260602@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D063	05/Mar/2023 10:00
5		3915587	Aakash Bhavesh Goradia	No	9594047370	sakash7goradia@gmail.com	Information Technology, B. Tech.	Dwarkadas J, Sanghvi College of Engineering, Mumbai	2024	80003200087	05/Mar/2023 10:00
6		3915568	Aaray Sharma	Yes	9086136332	aaravsharma 123123123@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J, Sanghvi College of Engineering, Mumbai	2024	80004200003	05/Mar/2023 10:00
7		3915569	Aaryan Kangle	Yes	7506056549	aaryanclever555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	LIG2024DJSCOEM121	05/Mat/2023 10:00
8		3915570	Asyush Pravin Panchal	Yes	8451873349	aayushpanchal658@gmail.com	Chemical Engineering, B. Tech,	Dwarkadas J. Sanghvi College of Engineering, Mulribai	2024	60011200068	27/Feb/2023 09:00
9		3915571	Aayushi Yagnesh Waghela	No	9137309337	aayushiwaghela3@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60003200165	05/Mar/2023 10:00
10		3915572	Aayushman Vikas Gupta	No	9820801859	guptaaayushmaan@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80004200086	05/Mar/2023 10:00
11		3915573	Abhay Rajesh Bhosle	Yes	9820833039	-abhaybhosle70@gmail.com	Electronics & TeleCommunication Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80002200156	05/Mar/2023 10:00
12		3915574	Abhijit Ashok Saha	Yes	9930227290	abhijits1802@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200112	05/Mar/2023 10:00
13		3915575	Abhinav Ajithkumar	Yes	9819896410	abhinavajithkumar4@gmail.com	Mechanical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60005200143	02/Mar/2021 10:06
14		3915576	Abhinav Banubakde	Yes	9307660453	abhivworld@gmail.com	Mechanical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60005200133	02/Mar/202: 10:00
15		3915577	Abhishek Umesh Tiwari	No	7977832463	abhishek93248@gmall.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80004200142	05/Mar/202 10:00
16		3915578	Adarsh Avinash Chaubey	Yes	7666205902	adarshc1212@gmail.com	Chemical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	80011210013	27/Feb/202 09:00

PROC PRINT DATA=attendance; TITLE 'attendance'; WHERE J IN ('60004200142','60004200141');

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Obs	Α	В	С	D	E	F	G	н	1	J	K
15		3915577	Abhishek Umesh Tiwari	No	7977832463	abhishek93248@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200142	05/Mar/2023 10:00
362		3915924	Rishabh Bhagwanlal Jain	No	9137827139	jainrishabh0607@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200141	05/Mar/2023 10:00

PROC SORT DATA=attendance; BY J; RUN; PROC PRINT DATA=attendance; TITLE 'attend (ASCENDING SAP ID)'; RUN;

attend (DESCENDING SAP ID)

Obs A	В	C	D	E	F	G	Н	1	J	K
1	3916039	Vallabh Shelar	Yes	9326690148	vallabhsshelar@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCOEM122	05/Mar/2023 10:00
2	3915569	Aaryan Kangte	Yes	7506056549	-aaryanclever555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	UG2024DJSCOEM121	05/Mar/2023 10:00
3	CoCubes Id	Name	Test Taken	Mobile	Primary Email	Branch, Degree	Institute Name	Batch	Roll Number	Slot Time
4	3915683	Dhruvil Shah	Yes	8104959566	dhruvilshah84@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	D069	05/Mar/2023 10:00
5	3915873	Parth B Bhut	No	9727812263	parthbhut1702@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D068	05/Mar/2023 10:00
6	3915833	Mohd Samir Ansan	No	8879810075	samiransari489@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering. Mumbai	2024	D067	05/Mar/2023 10:00
7	3915828	Miloni Shah	Yes	9326098929	shahmiloni51@gmail.com	Computer Science Engineering, B, Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D066	02/Mar/2023 10:00
8	3915907	Purvi Parmar	Yes	9167136503	purviparmar3011@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D065	02/Mar/2023 10:00
9	3915839	Neha Masurkar	Yes	8169697558	nehasmasurkar@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D064	05/Mar/2023 10:00
10	3915668	Devansh Shah	No	9620195923	devanshshah 129@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D063	05/Mar/2023 10:00
11	3916041	Varad Suryavanshi	No	9370347296	varad.suryavanshi12@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J, Sanghvi College of Engineering. Mumbai	2024	D061	05/Mar/2023 10:00
12	3916011	Sonal Nikam	Yes	8689816119	sonalnikam2003@gmail.com	Computer Science Engineering.	Dwarkadas J. Sanghvi	2024	D059	02/Mar/2023

(i) Messages: 31 User: u63311610

PROC SORT DATA=attendance; BY DESCENDING J; RUN;
PROC PRINT DATA=attendance;
TITLE 'attend (DESCENDING SAP ID)';
RUN;

Obe	A	В	C	D	E	F	G	н	E.	3	K
73		3915750	Jharana Vipul Solanki	No	9920669125	solarkijharana213@gmaii.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024		05/Mar/2023 10:00
2		3916084	Yuvraj Thakur	No	7900039523	yuvithakur7707@grmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbal	2024		05/Mar/2023 10:00
3											
4		3915963	Sanskruti Agrawal	Yes	9326394872	sarekrufinagrawal@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200017	02/Mar/2023 10:00
5		3915721	Hiral Mehla	No	8097085801	hiralymehta2002@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200020	05/Mar/2023 10:00
e		3915771	Keyaar Dearukhkar	No	8268667702	shrikeyoon@gmail.com	Electronics Engineering, 8. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200024	05/Mar/2023 10:00
7		3915751	Jiger Dilip Patel	Yes	9321584810	jackpater10032002@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbal	2024	60001200026	27/Feb/2023 09.00
8		3915787	Krishna Kawa	Yes	8080969898	krishnakawa27@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200028	05/Mar/2023 10:00
9		3915732	Ishita Vishal Chaubal	Yes	9833244104	ishitac23@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200036	27/Feb/2023 09:00
10		3916082	Yukta Jain	Yes	7039851195	yuktaj18@gmail.com	Electronics Engineering, B. Tech,	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200050	05/Mer/2023 10:00
11		3915895	Garresh Naik	No	7710940249	nak86233@gmail.com	Electronics Engineering, 8. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200054	05/Mer/2020 10:00
12		3915993	Shubham Vishwakarma	Yes	7738126391	sv773460@gmai.com	Electronics Engineering, B. Tech.	Dwarksdas J. Sanghvi College of Engineering.	2024	60001200055	27/Feb/2023 09:00

Conclusion: From this experiment, we learn how to create data by applying filters in SAS Studio and performing data analysis on it.