

**Name: Ayush Jain**  
**Div: B3**

**SAP ID: 60004200132**  
**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:

[illegible]

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

RUN;

attendance											
Obs	A	B	C	D	E	F	G	H	I	J	K
1		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/2023 10:00
3		3915565	Aadil Faisal Saudagar	No	9136709861	aadilsaudagar26@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60003200171	05/Mar/2023 10:00
4		3915566	Aadiya Patel	No	7039153505	patelaadiya260602@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D053	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	60003200087	05/Mar/2023 10:00
6		3915568	Aarav 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 Kangle	Yes	7506056549	aaryanclaver555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCOE121	05/Mar/2023 10:00
8		3915570	Aayush Pravin Panchal	Yes	8451873349	aayushpanchal659@gmail.com	Chemical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60011200058	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	9820601859	guptaayushman@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	9620833039	abhaybhosle70@gmail.com	Electronics & Telecommunication Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60002200156	05/Mar/2023 10:00
12		3915574	Abhijit Ashok Saha	Yes	9930227290	abhijits1802@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi	2024	60004200112	05/Mar/2023

PROC PRINT DATA=attendance;  
TITLE 'attendance';  
WHERE I="2024";

Obs	A	B	C	D	E	F	G	H	I	J	K
2		3671147	Harsh Shah	No	9833914188	shahh8138@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200084	05/Mar/2023 10:00
3		3915565	Aadil Faisal Saudagar	No	9136709861	aadilsaudagar26@gmail.com	Information Technology, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60003200171	05/Mar/2023 10:00
4		3915566	Aadiya Patel	No	7039153505	patelaadiya260602@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D053	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	60003200087	05/Mar/2023 10:00
6		3915568	Aarav 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 Kangle	Yes	7500056549	aaryanclaver555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCOE121	05/Mar/2023 10:00
8		3915570	Aayush Pravin Panchal	Yes	8451873349	aayushpanchal659@gmail.com	Chemical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60011200058	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	9820601859	guptaayushman@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	9620833039	abhaybhosle70@gmail.com	Electronics & Telecommunication Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60002200156	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/2023 10:00
14		3915576	Abhinav Banubekke	Yes	9907860453	abhinavb4@gmail.com	Mechanical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60005200133	02/Mar/2023 10:00
15		3915577	Abhishek Umesh Tiwari	No	7977632463	abhishek53248@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60004200142	05/Mar/2023 10:00
16		3915578	Adarsh Avinash Chaubey	Yes	7666205902	adarshc1212@gmail.com	Chemical Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60011210013	27/Feb/2023 09:00

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

Obs	A	B	C	D	E	F	G	H	I	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	3915624	Rishabh Bhagwanlal Jain	No	9137627139	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	B	C	D	E	F	G	H	I	J	K
1		3916039	Vallabh Shelar	Yes	9326690148	vallabhsshelar@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCOE122	05-Mar/2023 10:00
2		3915569	Aaryan Kangle	Yes	7506056549	aaryanclaver555@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	UG2024DJSCOE121	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	dhruvishah84@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D069	05-Mar/2023 10:00
5		3915673	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		3915633	Mohd Samir Ansari	No	8679610075	samiransari489@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D067	05-Mar/2023 10:00
7		3915626	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 Pamar	Yes	9167136503	purvipamar3011@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D065	02-Mar/2023 10:00
9		3915639	Neha Masurkar	Yes	8169697556	nehamasurkar@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D064	05-Mar/2023 10:00
10		3915666	Devansh Shah	No	9620195923	devanshshah129@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D063	05-Mar/2023 10:00
11		3916041	Varad Suryavamshi	No	9370347296	varad.suryavamshi12@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	8689616119	sonalnikam2003@gmail.com	Computer Science Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	D059	02-Mar/2023 10:00

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

Obs	A	B	C	D	E	F	G	H	I	J	K
1		3915750	Utharana Vipul Solanki	No	9520669125	solankijharana213@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024		05/Mar/2023 10:00
2		3916084	Yuvraj Thakur	No	7900039523	yuvrajthakur7707@gmail.com	Computer Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024		05/Mar/2023 10:00
3											
4		3915963	Sanskriti Agrawal	Yes	9326394572	sanskritinagrwal@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200017	02/Mar/2023 10:00
5		3915721	Hiral Mehta	No	8097065601	hiralymehta2002@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200020	05/Mar/2023 10:00
6		3915771	Keyoor Deorukhtar	No	8268667702	shrikeyoor@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200024	05/Mar/2023 10:00
7		3915751	Jiger Dilip Patel	Yes	9321564510	jackpatel10032002@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	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 Chaudhari	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	yukta18@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200050	05/Mar/2023 10:00
11		3915695	Garish Naik	No	7710940249	naik86233@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	2024	60001200054	05/Mar/2023 10:00
12		3915993	Shubham Vishwakarma	Yes	7738126391	sv773460@gmail.com	Electronics Engineering, B. Tech.	Dwarkadas J. Sanghvi College of Engineering, Mumbai	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.