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Sub: Business Analytics

Experiment 3

AIM: To manipulate data in SAS Studio using functions.

CODE/OUTPUT:

```
DATA MATH_FUNCTIONS;  
n1=1; n2=2; n3=3; n4=4; n5=5; MAXIMUM = MAX(n1,n2,n3,n4,n5); MINIMUM =  
MIN (n1,n2,n3,n4,n5); MEDIAN = MEDIAN (n1,n2,n3,n4,n5); RANDOM_VALUE =  
RANUNI(0); SUM = SUM(n1,n2,n3,n4,n5);  
SQUARE_ROOT_OF_SUM = SQRT(SUM(n1,n2,n3,n4,n5));  
RUN;  
PROC PRINT DATA = MATH_FUNCTIONS; TITLE 'MATH FUNCTIONS'; RUN;
```

MATH FUNCTIONS											
Obs	n1	n2	n3	n4	n5	MAXIMUM	MINIMUM	MEDIAN	RANDOM_VALUE	SUM	SQUARE_ROOT_OF_SUM
1	1	2	3	4	5	5	1	3	0.60900	15	3.87298

```
DATA DATE_FUNCTIONS;  
INPUT @1 date1 date9. @11 date2 date9.;  
FORMAT date1 date9. date2 date9.;  
YEAR_DIFFERENCE = INTCK('YEAR',date1,date2);  
MONTH_DIFFERENCE = INTCK('MONTH',date1,date2);  
WEEKDAY = WEEKDAY(date1);  
TODAY = TODAY();  
TIME = time();  
DATALINES;  
1MAY2012 10MAY2022  
5FEB2021 10FEB2022
```

Total rows: 3 Total columns: 7

	date1	date2	YEAR_DIFFERENCE	MONTH_DIFFERENCE	WEEKDAY	TODAY	TIME
1	01MAY2012	.	.	.	3	23102	81617.772081
2	05FEB2021	.	.	.	6	23102	81617.772159
3	23102	81617.772187

```
DATA CHARACTER_FUNCTIONS;
ORIGINAL = 'HELLO world';
```

```
LOWERCASE = LOWCASE('jAI SHRee Ram');
UPPERCASE = UPCASE('jAI SHRee Ram');
REVERSE = REVERSE('jAI SHRee Ram');
```

```
AFTER_SPLIT_1ST_WORD = SCAN('jAI SHRee Ram',1);
AFTER_SPLIT_2ND_WORD = SCAN('jAI SHRee Ram',2);
```

```
RUN;
```

```
PROC PRINT DATA = CHARACTER_FUNCTIONS;
TITLE 'CHARACTER FUNCTIONS';
RUN;
```

CHARACTER FUNCTIONS						
Obs	ORIGINAL	LOWERCASE	UPPERCASE	REVERSE	AFTER_SPLIT_1ST_WORD	AFTER_SPLIT_2ND_WORD
1	HELLO world	jai shree ram	JAI SHREE RAM	maR eeRHS IAj	jAI	SHRee

```
DATA NUMBER_TRUNCATE_FUNCTIONS;
ORIGINAL = 2.77;
CEIL = CEIL(2.77);
FLOOR = FLOOR(2.77);
INT = INT(2.77);
ROUND = ROUND(2.77);
```

```
RUN;  
PROC PRINT DATA = NUMBER_TRUNCATE_FUNCTIONS;  
TITLE 'NUMBER TRUNCATE FUNCTIONS';  
RUN;
```

NUMBER TRUNCATE FUNCTIONS					
Obs	ORIGINAL	CEIL	FLOOR	INT	ROUND
1	2.77	3	2	2	3

Conclusion: From this experiment, we learn how to manipulate data in SAS Studio using functions.