***Elect* Department of Electronics and Telecommunication Engineering**

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| Semester | T.E. Semester VI – EXTC Engineering |
| Subject | Computer Communication Network (CCN) |
| Laboratory Teacher: | Prof. Santosh Tamboli |
| Laboratory | MS-Teams online |

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| Experiment Number | 05 | |
| Experiment Title | String and Numeric functions in SQL | |
| Aim | To study string and numeric functions in SQL | |
| Resources / Apparatus Required | Hardware: PC | Software: Oracle Database 10g |
| Theory: | **String functions**: These are used for string manipulation. They perform an operation on a string input value and return a string or numeric value.  1. lower(): It converts to lower case  Eg.: select lower ('Welcome to India')  from dual  2. upper(): It converts to upper case  Eg.: select upper (‘Welcome to world of joy’)  from dual  3. initcap(): It converts initial letter of each word into upper case  Eg.: select initcap ('welcome to India')  from dual  4. length(): It counts number of characters in a string  Eg.: select length('Alice in wonderland')  from dual  5. concat(): It is used to join 2 strings  Eg.: select concat('Alice in wonderland',' Part 2')  from dual  6. substr(): It displays a part of a string  Eg.: --starting at position 1, extract all characters   select substr('Welcome',1)  from dual  --starting at position 2, extract 3 characters  select substr('Welcome',2,3)  from dual  --starting at position -3, extract 3 characters  select substr('Welcome',-3,3)  from dual    --starting at position -1, extract 3 characters  select substr('Welcome',-1,3)  from dual  7. instr(): It displays the index of a string  Eg.: select instr('Welcome','el')  from dual  8. lpad(): It pads certain characters on the left side of a string  Eg.: select lpad('Welcome',15,'\*')  from dual  9. rpad(): It pads certain characters on the right side of a string  Eg.: select rpad('Welcome',15,'\*')  from dual  10. trim(): It removes certain start and end characters from the string  Eg.: select trim('H' from 'HelloWorld')  from dual  select trim('H' from 'HelloHWorldH')  from dual  **Number Functions**: These are used to manipulate/perform operations on numeric value and return a numeric value.   1. round(): It rounds the decimal value   Eg.:  select round(45.923,2),round(45.923,1),round(45.923,0),  round(45.923,-1),round(55.923,-2),round(045.923,-2)  from dual   1. trunc(): It truncates the value   Eg.:  select trunc(45.923,2),trunc(45.923,1),trunc(45.923,0),  trunc(45.923,-1),trunc(55.923,-2)  from dual | |
| Results: | String functions                                                      Number functions | |
| Conclusion | In this tutorial, we learned how to manipulate strings, round numbers and truncate numbers on SQL. | |