

Objectiv	<ol style="list-style-type: none"> 1. <i>SQL SELECT</i> 2. <i>WHERE [Conditions, LIKE, IN , BETWEEN] + order by + LIMIT</i> 3. <i>SQL FUNCTIONS (Aggregate + Scalar)</i>
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Practical Work	<p style="text-align: center;">Part 1:</p> <ol style="list-style-type: none"> 1. Open HSQLDB and type in the following Query: <div style="border: 1px solid black; padding: 2px;">SET DATABASE SQL SYNTAX MYS TRUE</div> 2. We create the table for the following Schema: <div style="border: 1px solid black; padding: 2px;">Persons(<u>personid</u>, name, lastname, email, phone)</div> 3. Type the following SQL command: <div style="border: 1px solid black; padding: 2px;"> <pre>CREATE TABLE Persons(personid INT NOT NULL AUTO_INCREMENT, name VARCHAR(100) , lastname VARCHAR(100) , email VARCHAR(100) , phone VARCHAR(100) , PRIMARY KEY(personid) , UNIQUE(email));</pre> </div> 4. Insert the following data into the table using INSERT <div style="border: 1px solid black; padding: 2px;"> <pre>INSERT INTO Persons (name, lastname,email,phone) VALUES ('Jerry', 'Yang','jerry@yahoo.com', '091123'), ('Larry', 'Page','larry@google.com','099911'), ('Bill', 'Gates','bill@live.com','099901'), ('Michael', 'Dell','michael@dell.com','5138'), ('Pierre', 'Omidyar','pierre@ebay.com','4838'), ('Charles', 'Flint','charles@ibm.com','3838'), ('Lee', 'Byung-chull','lee@samsung.com','4838'), ('Steve', 'Jobs','steve@apple.com','5838'), ('Bill', 'Hewlett','bill@hp.com','6838');</pre> </div> 5. To search for all data in the table Persons <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons ;</div> 6. To show only : name and email: <div style="border: 1px solid black; padding: 2px;">SELECT name, email FROM Persons ;</div> <p style="text-align: center;">Part 2:</p> <ol style="list-style-type: none"> 1. To view the person whose personid is 4 <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid=4 ;</div> 2. To find a person whose name is bill <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE name='bill' ;</div> 	<ol style="list-style-type: none"> 3. To find people whose name starts with L <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE name LIKE 'L%' ;</div> 4. To find people whose name ends with e <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE name LIKE '%e' ;</div> 5. To find people whose name contains a <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE name LIKE '%a%' ;</div> 6. To find people whose personid is: 3 or 4 <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid=3 or personid=4 ;</div> 7. Find people whose: name contains 'a' AND personid>3 <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE name LIKE '%A%' AND personid>3 ;</div> 8. To find people whose personid is: 3 or 4 or 5 <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid IN (3 , 4 , 5) ;</div> 9. To find people whose personid is: 3 or 4 or 5 or 6 <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid BETWEEN 3 AND 6;</div> 10. Show all people sorted by their name DESCendingly : <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid>2 ORDER BY name DESC</div> 11. Show all people sorted by their name ASCendingly : <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid>2 ORDER BY name ASC</div> 12. Let's show only the first three persons <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE personid>2 ORDER BY name ASC LIMIT 0 , 3</div> <p style="text-align: center;">Part 3:</p> <p>(1) <i>Aggregate Functions: MAX, COUNT, MIN, AVG, SUM, ...</i> (2) <i>Scalar Functions: LENGTH, TRIM, LCASE,UCASE, SQRT, ABS, RAND, YEAR, MONTH, DAY....</i></p> <ol style="list-style-type: none"> 1. Find the number of people <div style="border: 1px solid black; padding: 2px;">SELECT count(personid) AS abc FROM Persons ;</div> 2. Find the people whose name has 5 letters <div style="border: 1px solid black; padding: 2px;">SELECT * FROM Persons WHERE LENGTH(name)=5 ;</div> 3. Show the name of the person in Upper case letters <div style="border: 1px solid black; padding: 2px;">SELECT UCASE(name) FROM Persons ;</div>
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Homework	<p>Answer the following questions:</p> <ol style="list-style-type: none"> 1. Find people whose personid IS NOT 3 2. Find people whose name does not contain 'e' 3. Explain the use for GROUP BY 4. What's the use of the function REGEX 5. What are the different types of Join ? 	<p>You can download HSQLDB from : www.learnadb.com/down/hsqldb.jar</p>
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