

# Cursors and Stored Procedures Illustration

```
CREATE TABLE employees (  
  id INT PRIMARY KEY AUTO_INCREMENT,  
  name VARCHAR(100),  
  department VARCHAR(50)  
);  
  
INSERT INTO employees (name, department) VALUES  
(  
  'Alice', 'HR',  
  'Bob', 'HR',  
  'Charlie', 'IT',  
  'David', 'HR');  
  
DELIMITER //  
  
CREATE PROCEDURE process_employee(IN emp_name VARCHAR(100))  
BEGIN  
  -- Here you can add complex logic  
  SELECT CONCAT('Processed employee: ', emp_name) AS message;  
END //  
  
DELIMITER ;  
  
DELIMITER //  
  
CREATE PROCEDURE process_hr_department()  
BEGIN  
  DECLARE done INT DEFAULT FALSE;  
  DECLARE emp_name VARCHAR(100);
```

```

DECLARE cur CURSOR FOR
    SELECT name FROM employees WHERE department = 'HR';
DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

OPEN cur;

read_loop: LOOP
    FETCH cur INTO emp_name;
    IF done THEN
        LEAVE read_loop;
    END IF;

    -- Call the nested procedure
    CALL process_employee(emp_name);
END LOOP;

CLOSE cur;
END //

DELIMITER ;

CALL process_hr_department();

```