

```
CREATE DATABASE areas1;
```

```
use areas1;
```

```
CREATE TABLE areas (
```

```
    radius INT,
```

```
    area DECIMAL(10,2)
```

```
);
```

```
DELIMITER $$
```

```
CREATE PROCEDURE CalculateAreas()
```

```
BEGIN
```

```
    DECLARE r INT DEFAULT 5;
```

```
    DECLARE a DECIMAL(10,2);
```

```
-- Exception handler for SQL errors
```

```
DECLARE EXIT HANDLER FOR SQLEXCEPTION
```

```
BEGIN
```

```
    SELECT 'Error: Unexpected SQL exception occurred.' AS message;
```

```
    ROLLBACK;
```

```
END;
```

```
-- Clear table before inserting values (optional)
```

```
TRUNCATE TABLE areas;
```

```
calc_loop: LOOP
```

```
-- Stop loop after radius = 9
IF r > 9 THEN
    LEAVE calc_loop;
END IF;

-- Calculate area = π * r2
SET a = 3.14 * r * r;

-- Insert into table
INSERT INTO areas VALUES (r, a);

-- Print output
SELECT CONCAT('Radius = ', r, ' | Area = ', a) AS result;

-- Increase radius
SET r = r + 1;

END LOOP calc_loop;

END$$

DELIMITER ;
```

CALL CalculateAreas();

