Blogging Platform

In this exercise you will create a database for a simple blogging platform. In this database there will be stored blog posts. For each post the following are mandatory:

- ID: A number that that is unique for each post.
- Title: Short text up to 200 characters
- Main text: Text up to 1000 characters
- Author: the user that uploads the post
- Publication Date

Additionally, each post should be accompanied by one or more keywords. The database should prevent the use of the same keyword in the same post more than once.

Insert data into the database. Create 10 posts, distributed into 3 different users. Each post should have at least one of the following keywords: “programming”, “learning”, “exercise”.

Finally, create SQL queries to answer the following:

Print all posts:

1) sorted based on the Publication Date. The newest post should be shown first.
2) of a given user, one of the three that are included in the database.
3) that have the keyword “programming”.
4) that were published in a given month and year (e.g. April 2021)
5) Print the user that has the most publications/posts

Your answers should include the following:

- SQL code to create the database and its tables
- SQL code that inserts 10 posts into the database
- SQL code for the 5 queries

My solution

-- **Database creation** (the following commands where tested on XAMPP)

```
CREATE DATABASE `blogging`;

CREATE TABLE posts(
   PostID int NOT NULL AUTO_INCREMENT,
   Title varchar(200) NOT NULL,
   PostText varchar(1000) NOT NULL,
   Username varchar(30) NOT NULL,
   PubDate date NOT NULL,
   PRIMARY KEY (PostID)
);
```

```
INSERT INTO posts(Title, PostText, Username, PubDate)
VALUES
('Java', 'java programmming language', 'dimitris123', '2008-11-11'),
('Python', 'python programming language', 'kostassim', '2019-12-05'),
('Learning Techniques', 'How to study efficiently', mariartg, '2019-08-12'),
('Online Lessons', 'Study with this course', kostassim, '2021-04-25'),
('Running', 'Outdoors exercises', 'mariartg', '2021-04-13'),
('Python', 'python programming language', 'kostassim', '2019-12-05'),
('Learning Techniques', 'How to study efficiently', dimitris123, '2019-08-12'),
('Online Lessons', 'Study with this course', dimitris123, '2021-04-25'),
('Running', 'Outdoors exercises', 'mariartg', '2021-04-13'),
(Rest, 'Importance of resting enough', 'dimitris123', '2020-08-13');


CREATE TABLE keywords (
   keywords varchar(30),
   PRIMARY KEY(keywords)
);


INSERT INTO keywords(keywords)
VALUES
('programming'),
('learning'),
('exercise'),
('teaching'),
('studies'),
('information');


CREATE TABLE Relation (
   PostID int NOT NULL,
   keywords varchar(30),
   FOREIGN KEY (PostID) REFERENCES posts(PostID),
   FOREIGN KEY (keywords) REFERENCES keywords(keywords),
   CONSTRAINT Const UNIQUE (PostID,keywords)
);


INSERT INTO relation
VALUES
   (1, 'programming'),
   (1, 'learning'),
   (2, 'exercise'),
   (3, 'programming'),
   (4, 'learning'),
   (4, studies'),
   (5, 'programming'),
   (6, 'exercise'),
   (6, information'),
   (7, 'programming'),
   (8, 'learning'),
   (8, 'information'),
```

```
   (9, 'learning'),
   (10, 'programming');
```

--**SQL Queries**

```
1)  SELECT *
FROM Posts
ORDER BY PubDate DESC

2) SELECT *
FROM Posts
WHERE username = 'dimitris123'

3) use `blogging`;
SELECT *
FROM posts
WHERE PostID IN (
   SELECT PostID
         FROM relation
         WHERE keywords = 'programming'
);

4)  SELECT *
FROM Posts
WHERE MONTH(PubDate) = 4 AND YEAR(PubDate) = 2021

5)
SELECT username, COUNT(PostID)
FROM Posts
GROUP BY username
ORDER BY COUNT(PostID) DESC
LIMIT 1;
```