

# Assignment 1: Social Media Content Moderation System

## Problem Description

You are building a real-time content moderation system for a social media platform. The system must detect if any new post contains previously flagged harmful phrases or words. Your moderators maintain a blacklist of thousands of harmful phrases that gets updated hourly.

## Requirements

- Implement a system that can quickly determine if a text post contains any blacklisted phrase
- The system receives a stream of posts (strings) and must flag posts containing any blacklisted phrase
- Support case-insensitive matching
- Handle partial word matching (e.g., if 'badword' is blacklisted, flag 'thisbadwordhere')
- Optimize for speed using hash table data structures

## Input Specification

- A list of blacklisted phrases (up to 10,000 phrases)
- A stream of posts to check (up to 1,000 posts, each up to 500 characters)

## Output Specification

For each post, output whether it should be flagged and which blacklisted phrases were found.

## Example Input/Output

### Input - Blacklisted Phrases:

```
["hate speech", "buy followers", "click here now", "banned content", "illegal drugs"]
```

### Input - Posts to Check:

```
Post 1: "Check out my new recipe for chocolate cake!"
Post 2: "CLICK HERE NOW for amazing deals!!!" Post 3: "I
don't agree with that hate speech in the comments"
Post 4: "Buy_Followers cheap and fast delivery"
Post 5: "This is a normal post about my day"
```

### Expected Output:

```
Post 1: CLEAN
Post 2: FLAGGED - Contains: ["click here now"]
Post 3: FLAGGED - Contains: ["hate speech"]
Post 4: FLAGGED - Contains: ["buy followers"]
Post 5: CLEAN
```