시간 관리 앱

TIME MANAGER

202433882 배진우
HTTPS://GITHUB.COM/GGINI12/MOBILEAPP/TREE/MAIN

CONTENTS

목차

1 제작 동기

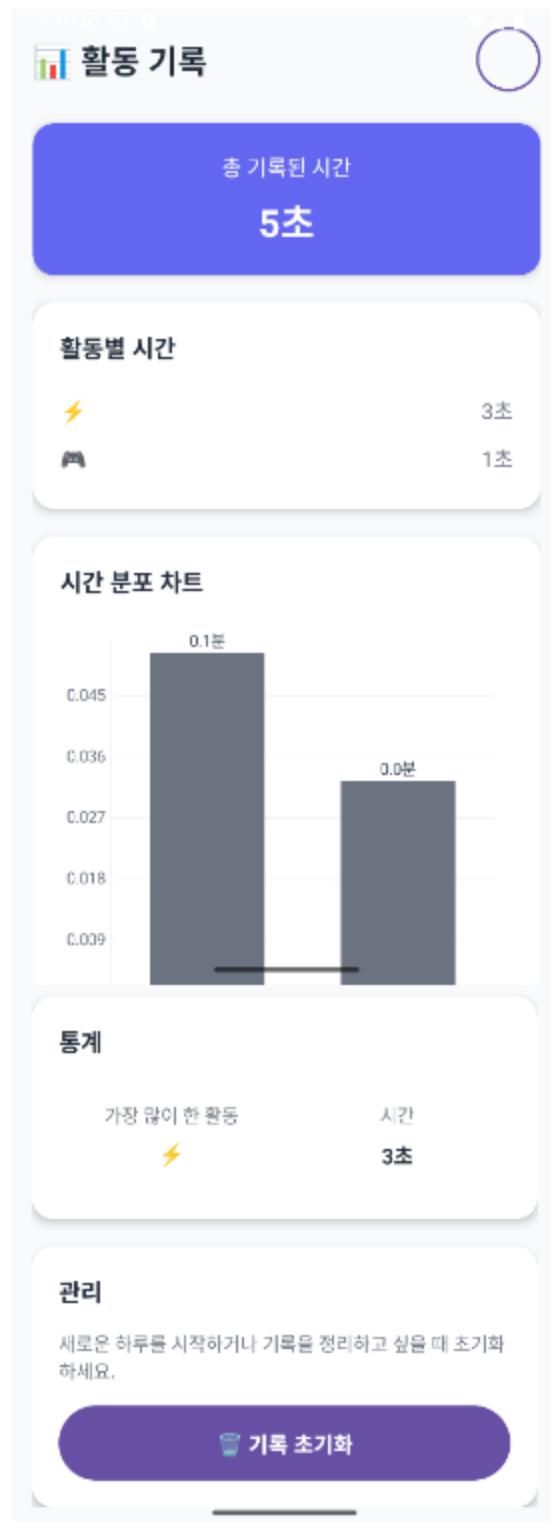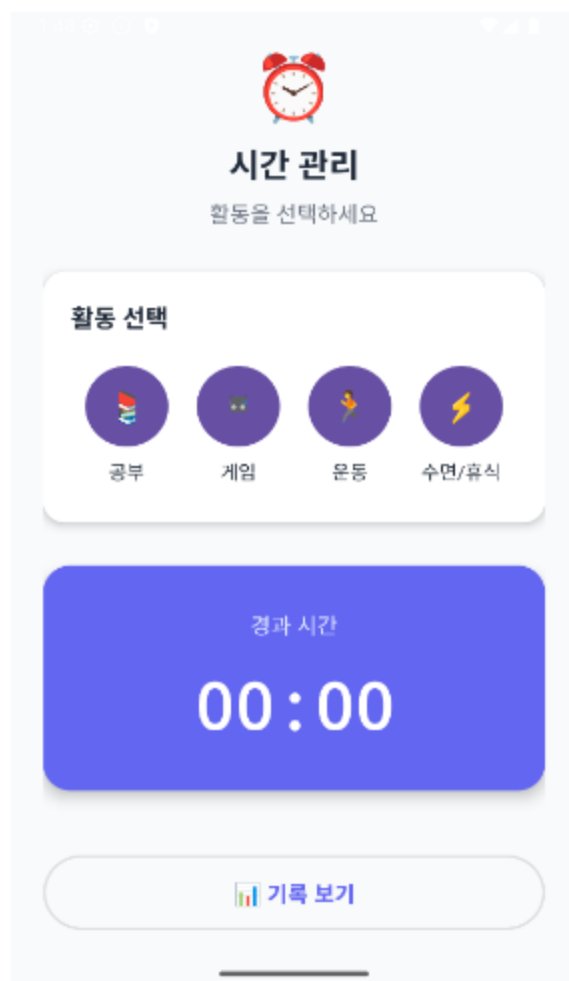**2** 기능 설명

3 기대 효과

4 HISTORY/마무리

제작 동기

나의 하루를 돌아 볼 수 있는 앱

항상 뭔가를 한 것 같지 않은데 시간이 금방 지나가고, 정작 중요한 일에 쓸 시간이 부족하다고 느낄 때가 많았습니다.

그래서 내가 하루를 어떻게 보내고 있는지 파악하고, 시간을 보다 효율적으로 활용하기 위해 이 앱을 제작하게 되었습니다.

기능 소개

활동 선택
4가지의 버튼중 하나를 눌러서 활동 시간을 잴 수 있다.

기록 보기
두번째 화면인 활동 기록 페이지로 넘어가서 누적해놨던
기록을 볼수있다.

그래프 및 통계
각 활동별 시간을 볼 수 숫자와 그래프로 확인 가능하고 가장 많이
한 활동을 확인할 수 있다.

기록 초기화
기록 초기화 버튼을 누르면 누적되었던 시간이 초기화가 되면서
새로 시작할 수 있다.

기능 소개

선언 및 초기화

```java
private Chronometer chronometer;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    chronometer = findViewById(R.id.chronometer);
}
```

타이머 시작

```java
btnStart.setOnClickListener(v -> {
    if (!selectedActivity.isEmpty()) {
        startTime = SystemClock.elapsedRealtime();
        chronometer.setBase(startTime);
        chronometer.start();

        btnStop.setVisibility(View.VISIBLE);
        btnStart.setVisibility(View.GONE);
        setActivityButtonsEnabled(false);
    }
});
```

타이머 정지 및 시간 저장

```java
btnStop.setOnClickListener(v -> {
    chronometer.stop();
    long endTime = SystemClock.elapsedRealtime();
    long elapsedMillis = endTime - startTime;

    activityNames.add(selectedActivity);
    activityDurations.add(elapsedMillis);

    // UI 업데이트
    btnStop.setVisibility(View.GONE);
    selectedActivityText.setText("활동을 선택하세요");
    selectedActivity = "";
    setActivityButtonsEnabled(true);
});
```

CHRONOMETER

ANDROID SDK에서 기본으로 제공하는 유틸리티(화면에 보이는)
스톱워치 처럼 00:00 형태로 시간을 보여준다.
간결한 시간처리

기능 소개

시간 측정 핵심

```java
private long startTime = 0;

// 시작 시간 기록
startTime = SystemClock.elapsedRealtime();
chronometer.setBase(startTime);

// 종료 시간 계산
long endTime = SystemClock.elapsedRealtime();
long elapsedMillis = endTime - startTime;

// 데이터 저장
activityDurations.add(elapsedMillis);
```

시간 포멧팅 함수

```java
private String formatDuration(long milliseconds) {
    long seconds = milliseconds / 1000;
    long minutes = seconds / 60;
    long hours = minutes / 60;

    if (hours > 0) {
        return String.format("%d시간 %d분", hours, minutes % 60);
    } else if (minutes > 0) {
        return String.format("%d분 %d초", minutes, seconds % 60);
    } else {
        return String.format("%d초", seconds);
    }
}
```

SYSTEM CLOCK

ANDROID SDK에서 기본으로 제공하는 유틸리티(화면에 보이지않음)
시간의 값만 제공한다.(백그라운드에서도 돌아감)
정밀한 시간 처리

기능 소개

차트 초기화 및 데이터 설정

```java
private BarChart barChart;

private void setupChart(ArrayList<String> names, ArrayList<Long> durations) {
    ArrayList<BarEntry> entries = new ArrayList<>();
    ArrayList<Integer> colors = new ArrayList<>();

    // 데이터 변환 (밀리초 → 분)
    for (int i = 0; i < durations.size(); i++) {
        float minutes = durations.get(i) / 60000f;
        entries.add(new BarEntry(i, minutes));

        // 활동별 색상 설정
        String activityName = names.get(i);
        Integer color = activityColors.get(activityName);
        colors.add(color != null ? color : Color.parseColor("#6B7280"));
    }

    BarDataSet dataSet = new BarDataSet(entries, "");
    dataSet.setColors(colors);
    dataSet.setValueTextSize(12f);
}
```

차트 스타일링

```java
// 차트 기본 설정
barChart.getDescription().setEnabled(false);
barChart.getLegend().setEnabled(false);
barChart.setDrawGridBackground(false);
barChart.setTouchEnabled(true);

// X축 설정 (활동 이름)
XAxis xAxis = barChart.getXAxis();
ArrayList<String> xLabels = new ArrayList<>();
for (String name : names) {
    String emoji = activityEmojis.get(name);
    xLabels.add((emoji != null ? emoji + " " : "") + name);
}
xAxis.setValueFormatter(new IndexAxisValueFormatter(xLabels));
xAxis.setPosition(XAxis.XAxisPosition.BOTTOM);

// Y축 설정
YAxis leftAxis = barChart.getAxisLeft();
leftAxis.setDrawGridLines(true);
leftAxis.setAxisMinimum(0f);

barChart.setData(new BarData(dataSet));
barChart.animateY(1000, Easing.EaseOutCubic);
barChart.invalidate();
```

MP ANDROID CHART

ANDROID SDK에서 제공하지 않는 외부 라이브러리
시간의 데이터를 직관적인 그래프 형식으로 변환 시켜준다.

기대 효과

현실적인 시간 감각

내가 각 활동에 얼마나 시간을 쓰는지 정확히 파악이 가능해 진다.

자기 성찰

사용되는 시간을 정확히 파악할 수 있기 때문에 중요 활동에 충분한 시간을 쓰고있는지 확인할 수 있다.

생활 습관 개선

공부,운동,게임,휴식등 각각의 시간을 적절하게 분배하여 사용할 수 있다.
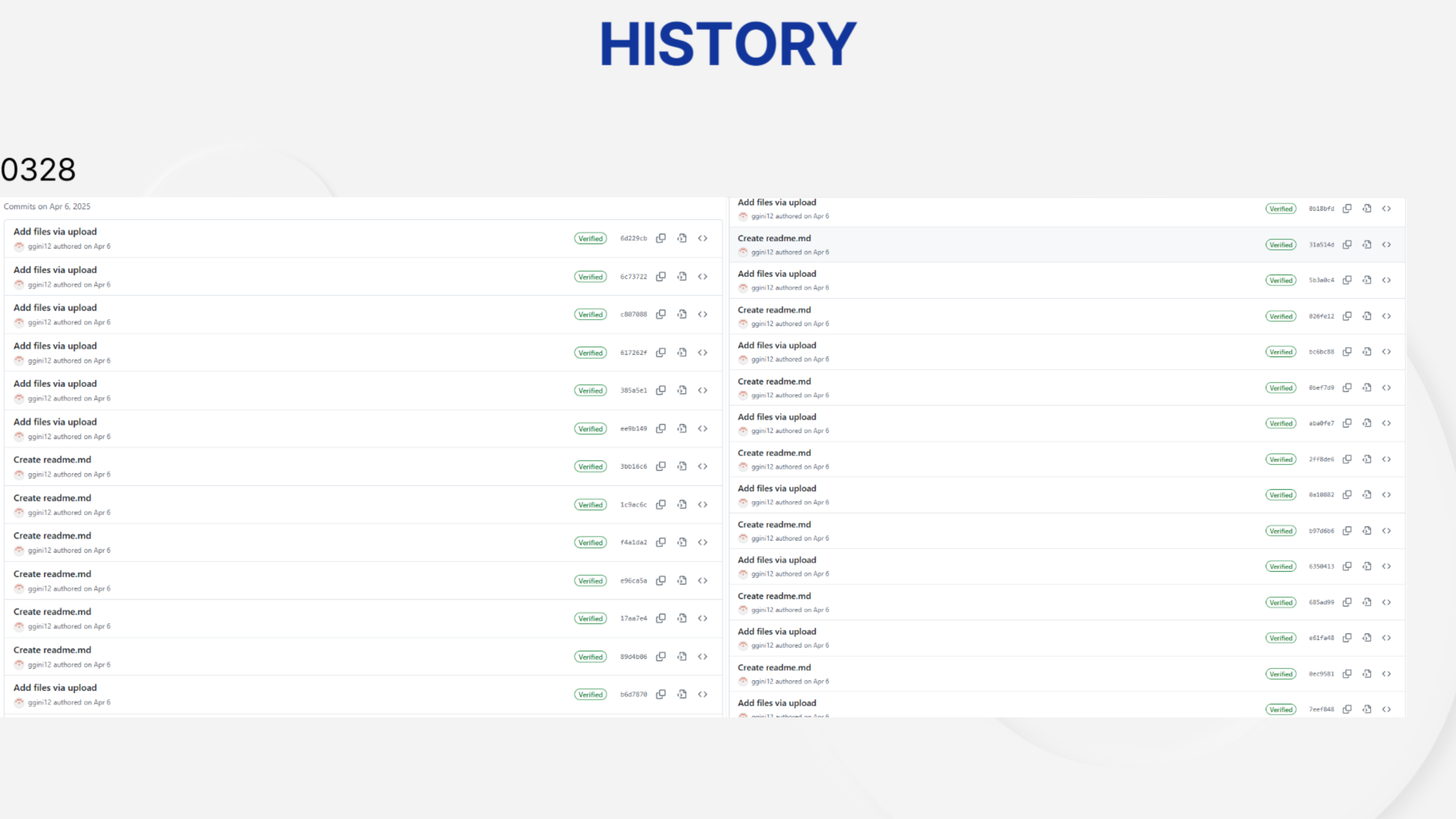
기대 효과

HISTORY

0321

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ggini12 authored on Mar 23
Verified · 5b9ee6a

Create readme.md
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Verified · 8f3b4e7

Commits on Mar 21, 2025

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HISTORY

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HISTORY

0404

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0411

Commits on May 30, 2025

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Verified · d45864e

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Commits on Apr 11, 2025

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0418

Commits on Apr 18, 2025

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0502

Commits on May 30, 2025

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Commits on May 9, 2025

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Verified · c652be8

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Verified · 517c08c

Commits on May 2, 2025

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Verified · 6286a71

0509

Commits on May 30, 2025

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Verified · 43ee419

Commits on May 9, 2025

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Verified · cb90eba

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Verified · 95c177f

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Verified · 9cb4db3

Create readme.md
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HISTORY

0516

Commits on May 30, 2025

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Commits on May 16, 2025

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0523

Commits on May 30, 2025

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Create readme.md
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Verified · 6e9c0d5

나의 점수

25점

수업한번 빠진것과 늦게 제출한것 때문에 25점 했습니다.

프로젝트 : 15
깃허브 : 10

감사합니다.