PEMROGRAMAN MOBILE
PERTEMUAN – 09
UJIAN TENGAH SEMESTER

Oleh :

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POLITEKNIK NEGERI MALANG
PROGRAM STUDI D-IV SISTEM INFORMASI BISNIS
JURUSAN TEKNOLOGI INFORMASI

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Soal 1: Modifikasi Struktur Navigasi dan Aliran

Lakukan commit awal untu branch main

UTS: Basis awal proyek OCR Sederhana

bhimantara435 committed 16 hours ago

Pengubahan Navigasi Home :

HomeScreen (lib/screens/home_screen.dart) - Ganti ElevatedButton menjadi ListTile:

```dart
import 'package:flutter/material.dart';
import 'scan_screen.dart';

class HomeScreen extends StatelessWidget {
  const HomeScreen({super.key});

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: const Text('Menu Utama')),
      body: Center(
        child: Card(
          margin: const EdgeInsets.all(16),
          child: ListTile(
            leading: const Icon(Icons.camera_alt, color: Colors.blue),
            title: const Text('Mulai Pindai Teks Baru'),
            onTap: () {
              Navigator.push(
                context,
                MaterialPageRoute(builder: (context) => const ScanScreen()),
              );
            },
          ),
        ),
      ),
    );
  }
}
```

Teks Utuh dan Navigasi Balik :

ResultScreen (lib/screens/result_screen.dart)

Hapus Kode :

```dart
ocrText.replaceAll('\n', ' '),
```
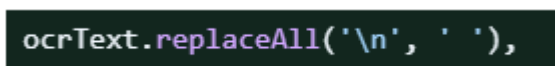
Tambahkan tombol kembali ke Home:

```dart
import 'package:flutter/material.dart';
import 'home_screen.dart';

class ResultScreen extends StatelessWidget {
  final String ocrText;

  const ResultScreen({super.key, required this.ocrText});

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: const Text('Hasil OCR')),
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: SingleChildScrollView(
          child: SelectableText(
            ocrText.isEmpty
                ? 'Tidak ada teks ditemukan.'
                : ocrText, // mempertahankan format baris asli
            style: const TextStyle(fontSize: 18),
          ),
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: () {
          Navigator.pushAndRemoveUntil(
            context,
            MaterialPageRoute(builder: (context) => const HomeScreen()),
            (route) => false,
          );
        },
        child: const Icon(Icons.home),
      ),
    );
  }
}
```

Output :

Hello world

Commit :

UTS: Selesai Soal 1 - ListTile dan Navigasi Balik

bhimantara435 committed 16 hours ago

Soal 2: Penyesuaian Tampilan dan Penanganan State/Error

Custom Loading :

Dalam lib/screens/scan_screen.dart, di bagian:

```
1   if (_controller == null || !_controller!.value.isInitialized) return;
```

Di ganti menjadi :

```
1   // BAGIAN YANG DIGANTI: Custom Loading Screen
2       if (_controller == null || !_controller!.value.isInitialized) {
3         return Scaffold(
4           backgroundColor: Colors.grey[900], // Warna latar belakang gelap
5           body: Center(
6             child: Column(
7               mainAxisAlignment: MainAxisAlignment.center,
8               children: const [
9                 CircularProgressIndicator(color: Colors.yellow), // Loading kuning
10                SizedBox(height: 20),
11                Text(
12                  'Memuat Kamera... Harap tunggu.', // Pesan teks
13                  style: TextStyle(color: Colors.white, fontSize: 18),
14                ),
15              ],
16            ),
17          ),
18        );
19      }
20
```

Tambahkan pesan error :

```
1   // Pesan error
2       ScaffoldMessenger.of(context).showSnackBar(
3         const SnackBar(
4           content: Text("Pemindaian Gagal! Periksa Izin Kamera atau coba lagi."),
5         ),
6       );
7     }
8   }
```
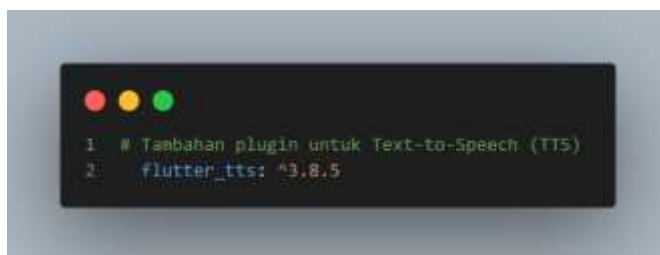
Ouput :
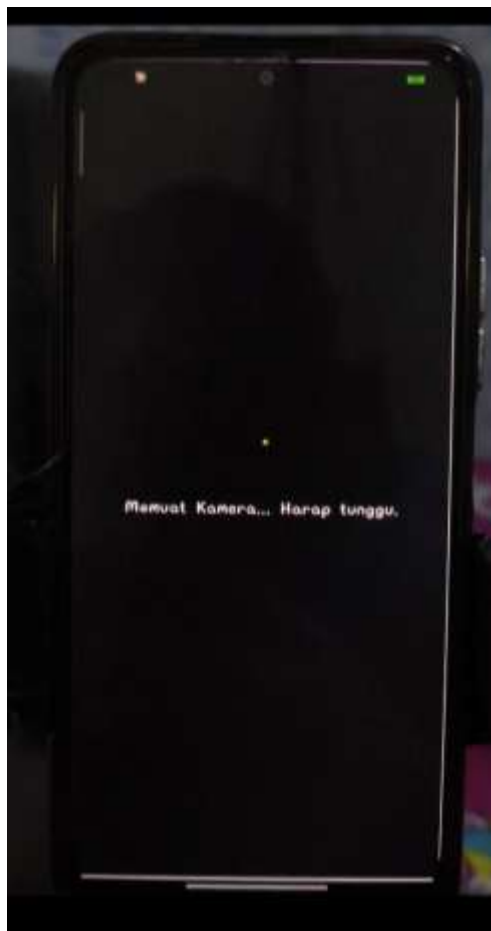
Commit :

```
C:\androidprojects\JS7_Bhimantara\ocr_sederhana>git add lib/screens/scan_screen.dart
warning: in the working copy of 'lib/screens/scan_screen.dart', LF will be replaced by CRLF the next time Git touches it

C:\androidprojects\JS7_Bhimantara\ocr_sederhana>git commit -m "UTS: Selesai Soal 2 - Tampilan Loading dan Error"
[main 910ceb3] UTS: Selesai Soal 2 - Tampilan Loading dan Error
 1 file changed, 22 insertions(+), 6 deletions(-)

C:\androidprojects\JS7_Bhimantara\ocr_sederhana>git push origin main
Everything up-to-date
```

Commits on Oct 22, 2025

UTS: Selesai Soal 2 - Tampilan Loading dan Error

bhimantara435 committed 2 minutes ago
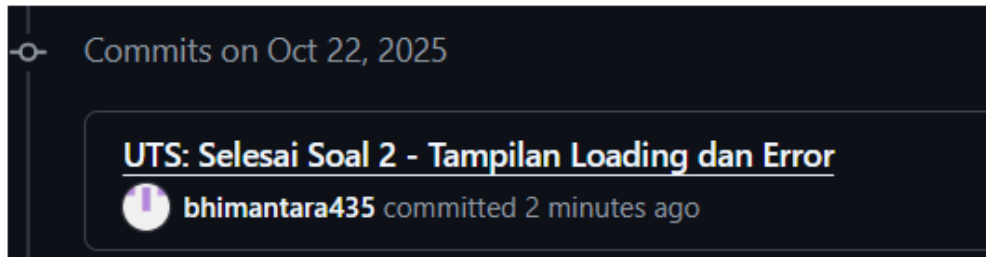
Soal 3: Implementasi Plugin Text-to-Speech (TTS)

Instal Plugin
Menambahkan di pubspec.yaml:

```
1   # Tambahan plugin untuk Text-to-Speech (TTS)
2     flutter_tts: ^3.8.5
```

Konversi ke StatefulWidget (10 poin)

- **Ubah ResultScreen jadi StatefulWidget.**

- **Di initState(), inisialisasi FlutterTts dan atur bahasa**

```
1   final FlutterTts flutterTts = FlutterTts(); // • Inisialisasi FlutterTts
2
3     @override
4     void initState() {
5       super.initState();
6       flutterTts.setLanguage("id-ID"); // • Set bahasa ke Bahasa Indonesia
7     }
8
9     @override
10    void dispose() {
11      flutterTts.stop(); // • Hentikan suara saat halaman ditutup
12      super.dispose();
13    }
```

Fungsi Bicara

Menambahkan tombol suara :

```
// + Tambahkan dua tombol aksi
FloatingActionButton: Column(
  mainAxisAlignment: MainAxisAlignment.end,
  children: [
    FloatingActionButton(
      heroTag: "speakButton",
      onPressed: () async {
        if (widget.ocrText.isNotEmpty) {
          await flutterTts.speak(widget.ocrText);
        } else {
          ScaffoldMessenger.of(context).showSnackBar(
            const SnackBar(
              content: Text("Tidak ada teks untuk dibacakan."),
            ),
          );
        }
      },
      child: const Icon(Icons.volume_up),
    ),
    const SizedBox(height: 12),
    FloatingActionButton(
      heroTag: "homeButton",
      onPressed: () {
        Navigator.pushAndRemoveUntil(
          context,
          MaterialPageRoute(builder: (context) => const HomeScreen()),
          (route) => false,
        );
      },
      child: const Icon(Icons.home),
    ),
```

Output :

Hello world

Screenrecorder-2025-10-22-16-10-02-960.mp4

16:07

← Hasil OCR

Hello world

Commit :

```
C:\androidprojects\JS7_bhimantara\ocr_sederhana>git add pubspec.yaml lib/screens/result_screen.dart
warning: in the working copy of 'lib/screens/result_screen.dart', LF will be replaced by CRLF the next time Git touches it

C:\androidprojects\JS7_bhimantara\ocr_sederhana>git commit -m "UTS: Selesai Soal 3 - Implementasi Flutter TTS"
[main 7f01c37] UTS: Selesai Soal 3 - Implementasi Flutter TTS
 6 files changed, 73 insertions(+), 12 deletions(-)

C:\androidprojects\JS7_bhimantara\ocr_sederhana>git push origin main
Enumerating objects: 27, done.
Counting objects: 100% (27/27), done.
Delta compression using up to 24 threads
Compressing objects: 100% (14/14), done.
Writing objects: 100% (14/14), 2.34 KiB | 600.00 KiB/s, done.
Total 14 (delta 9), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (9/9), completed with 9 local objects.
To https://github.com/bhimantara435/ocr_sederhana.git
   9j0ceb3..7f01c37  main -> main
```

UTS: Selesai Soal 3 - Implementasi Flutter TTS

bhimantara435 committed 1 minute ago