LAPORAN PRAKTIKUM

POSTTEST 6

ALGORITMA PEMROGRAMAN DASAR

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Kelas (C1’25)

PROGRAM STUDI INFORMATIKA

UNIVERSITAS MULAWARMAN

SAMARINDA

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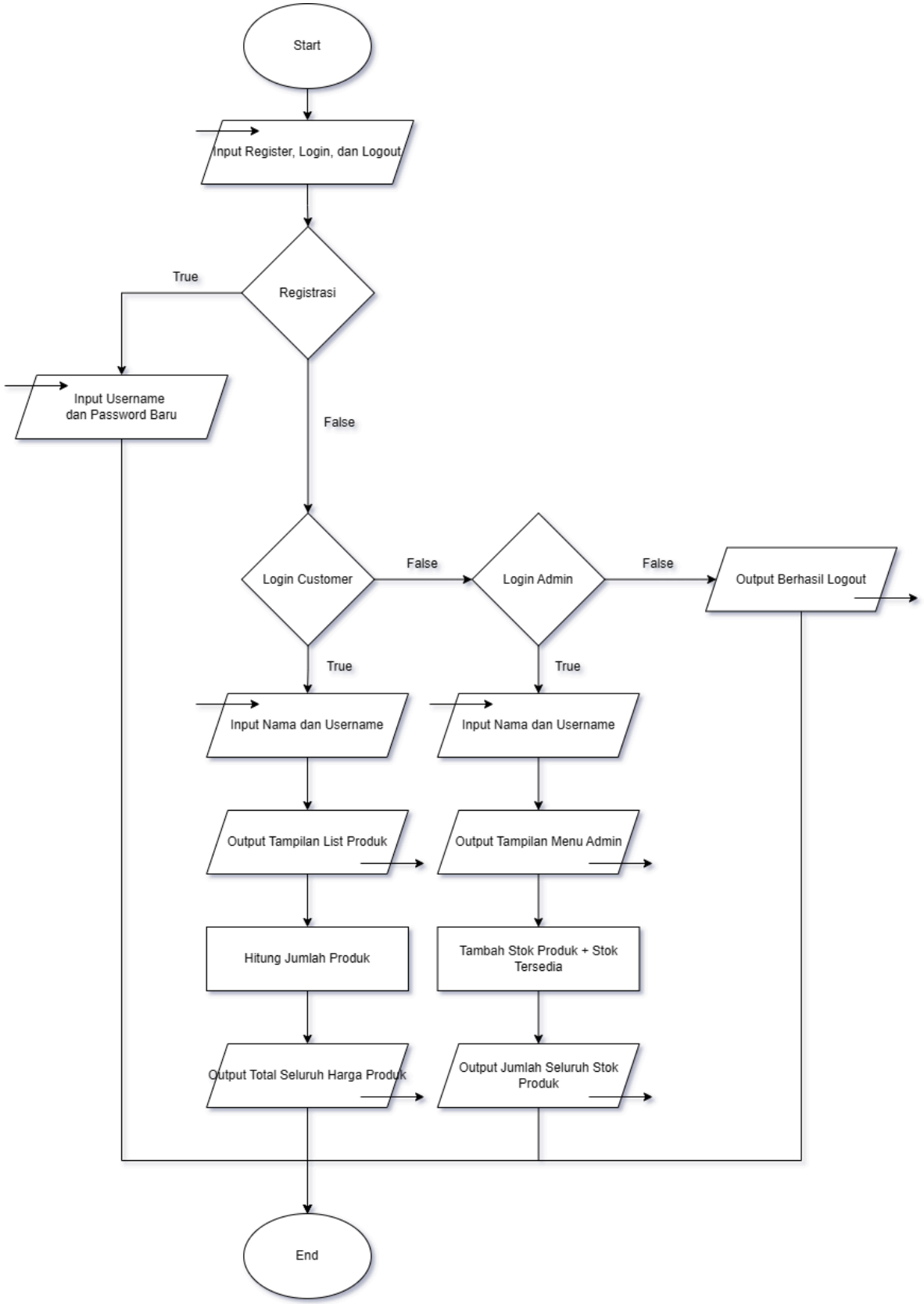
1. Flowchart



Gambar 1.0 Flowchart

2. Deskripsi Program

Program ini dibuat sebagai bentuk aplikasi yang dapat digunakan pengguna untuk membeli sebuah tiket dan merchandise pada sebuah balapan 24 Jam Nürburgring Nordschleife yang ada di Jerman dan mempermudah pengguna untuk mengakses pembelian tiket dimanapun dan kapanpun pengguna berada tanpa harus datang langsung ke tempat penjualan tiketnya dan aplikasi ini cukup praktis pada penggunaannya yang dimana pengguna cukup registrasi dan login untuk membeli tiket tersebut dengan mudah dan cepat.

3. Source Code

```
import os
os.system("cls")

data = {
    "users": {
        "Admin": {"password": "Sufi123", "role": "admin"},
        "Customer": {"password": "Sufi456", "role": "customer"},
    },
    "carts": {"Sufi": []},
    "tickets": {
        1: {"name": "Event Ticket (Thur-Sun)", "price": 1500000, "stock":
100},
        2: {"name": "Weekend Ticket (Fri-Sun)", "price": 1300000, "stock":
200},
        3: {"name": "Race Ticket", "price": 1150000, "stock": 300},
        4: {"name": "Day Ticket", "price": 700000, "stock": 350},
        5: {"name": "Paddock Access Add-on", "price": 1000000, "stock": 75},
    },
    "merch": {
        1: {"name": "N24H Official T-Shirt", "price": 1200000, "stock":
100},
        2: {"name": "N24H Cap", "price": 600000, "stock": 120},
        3: {"name": "N24H Sunglasses", "price": 2700000, "stock": 75},
        4: {"name": "Wall Clock (NBR)", "price": 700000, "stock": 100},
        5: {"name": "Scale Model Car 1:43", "price": 1300000, "stock": 75},
    },
    "transactions": [],
    "state": {
        "pengguna_saat_ini": "",
        "peran_saat_ini": "",
        "hasil_input_int": None,
        "produk_dipilih": None,
        "jenis_produk": None,
        "admin_produk_dipilih": None,
        "admin_id_dipilih": None,
        "admin_jenis_dipilih": None,
```

```
    },
}

while True:
    print()
    print(" ==| Selamat Datang Di Nürburgring |==")
    print("+-----------------------------------+")
    print("1. Daftar")
    print("2. Login")
    print("3. Keluar")
    choice = input("pilih: ").strip()
    if choice == "1":
        print()
        print("== daftar akun ==")
        while True:
            username = input("username baru: ").strip()
            if username == "":
                print("username kosong.")
                break
            if username in data["users"]:
                print("username sudah ada, coba yang lain.")
                break
            password = input("password baru: ").strip()
            if password == "":
                print("password kosong.")
                break
            data["users"][username] = {"password": password, "role":
"customer"}
            data["carts"][username] = []
            print("daftar sukses. silakan login sebagai:", username)
            break
        input("tekan enter... ")
    elif choice == "2":
        print()
        print("== login ==")
        username = input("username: ").strip()
        password = input("password: ").strip()
        user = data["users"].get(username)
        if user and user["password"] == password:
            data["state"]["pengguna_saat_ini"] = username
            data["state"]["peran_saat_ini"] = user["role"]
            print("login sukses. halo,", username)
        else:
            data["state"]["pengguna_saat_ini"] = ""
            data["state"]["peran_saat_ini"] = ""
            print("username atau password salah.")
        input("tekan enter... ")
```

```
        user = data["state"]["pengguna_saat_ini"]
        role = data["state"]["peran_saat_ini"]
        if user and role == "customer":
            while True:
                print()
                print("== menu pelanggan ==")
                print("1. beli tiket")
                print("2. beli merchandise")
                print("3. lihat keranjang")
                print("4. checkout")
                print("5. logout")
                ch = input("pilih: ").strip()
                if ch == "1" or ch == "2":
                    category = "tiket" if ch == "1" else "merch"
                    products = data["tickets"] if category == "tiket" else
data["merch"]
                    title = "daftar tiket" if category == "tiket" else
"daftar merchandise"

                    print()
                    print("== " + title + " ==")
                    print("{:<3} {:<30} {:>12} {:>8}".format("ID", "Nama",
"Harga (Rp)", "Stok"))
                    print("-" * 60)
                    for ID_Barang in sorted(products.keys()):
                        p = products[ID_Barang]
                        print("{:<3} {:<30} {:>12,} {:>8}".format(ID_Barang,
p["name"], p["price"], p["stock"]))
                    print("-" * 60)

                    s = input("masukkan id produk (kosong = batal):
").strip()
                    ID_Barang = None
                    if s != "":
                        ss = s
                        if (ss[0] in "+-" and ss[1:].isdigit()) or
ss.isdigit():
                            try_int = ss
                            if try_int[0] == "+":
                                try_int = try_int[1:]
                            ID_Barang = int(try_int)
                        else:
                            ID_Barang = None
                    if ID_Barang is None or ID_Barang not in products:
                        print("id tidak valid atau batal.")
                    else:
                        s2 = input(f"jumlah untuk
'{products[ID_Barang]['name']}' (kosong = batal): ").strip()
```

```
                        Jumlah = None
                        if s2 != "":
                            ss2 = s2
                            if (ss2[0] in "+-" and ss2[1:].isdigit()) or
ss2.isdigit():
                                if ss2[0] == "+":
                                    ss2 = ss2[1:]
                                Jumlah = int(ss2)
                                if Jumlah <= 0:
                                    Jumlah = None
                            else:
                                Jumlah = None
                        if Jumlah is None:
                            print("jumlah tidak valid atau batal.")
                        elif Jumlah > products[ID_Barang]["stock"]:
                            print("stok tidak cukup. sisa:",
products[ID_Barang]["stock"])
                        else:
                            data["carts"].setdefault(user, []).append({"id":
ID_Barang, "quantity": Jumlah, "type": category})
                            print(f"berhasil tambah {Jumlah} x
{products[ID_Barang]['name']} ke keranjang.")
                    input("tekan enter... ")

                elif ch == "3":
                    print()
                    print("== keranjang ==")
                    cart = data["carts"].get(user, [])
                    if not cart:
                        print("keranjang kosong.")
                    else:
                        total = 0
                        print("{:<3} {:<30} {:>6} {:>14}".format("No",
"Nama", "Jumlah", "Subtotal"))
                        print("-" * 60)
                        for i, item in enumerate(cart, 1):
                            products = data["tickets"] if item["type"] ==
"tiket" else data["merch"]
                            p = products[item["id"]]
                            subtotal = p["price"] * item["quantity"]
                            total += subtotal
                            print("{:<3} {:<30} {:>6} {:>14,}".format(i,
p["name"], item["quantity"], subtotal))
                        print("-" * 60)
                        print("total: rp", f"{total:,}", sep="")
                    input("tekan enter... ")

                elif ch == "4":
```

```
                    cart = data["carts"].get(user, [])
                    if not cart:
                        print("keranjang kosong.")
                    else:
                        stok_ok = True
                        for item in cart:
                            products = data["tickets"] if item["type"] ==
"tiket" else data["merch"]
                            if item["quantity"] >
products[item["id"]]["stock"]:
                                print("stok tidak cukup untuk",
products[item["id"]]["name"], ". transaksi dibatalkan.")
                                stok_ok = False
                                break
                        if not stok_ok:
                            print("cek lagi stok sebelum coba checkout.")
                        else:
                            total = 0
                            for item in cart:
                                products = data["tickets"] if item["type"]
== "tiket" else data["merch"]
                                products[item["id"]]["stock"] -=
item["quantity"]
                                total += products[item["id"]]["price"] *
item["quantity"]
                            data["transactions"].append({"customer": user,
"items": list(cart), "total": total})
                            data["carts"][user] = []
                            print("transaksi berhasil. total: rp",
f"{total:,}", ". terima kasih!", sep="")
                    input("tekan enter... ")

                elif ch == "5":
                    print("logout.")
                    break
                else:
                    print("pilihan salah.")
                    input("tekan enter... ")

        elif user and role == "admin":
            while True:
                print()
                print("== menu admin ==")
                print("1. laporan")
                print("2. ubah harga")
                print("3. tambah stok")
                print("4. set stok")
                print("5. logout")
```

```
                ch = input("pilih: ").strip()
                if ch == "1":
                    print()
                    print("== laporan transaksi ==")
                    if not data["transactions"]:
                        print("belum ada transaksi.")
                    else:
                        for i, t in enumerate(data["transactions"], 1):
                            print(f"transaksi #{i} -- pelanggan:
{t['customer']}, total: rp{t['total']:,}")
                            for it in t["items"]:
                                products = data["tickets"] if it["type"] ==
"tiket" else data["merch"]
                                print(f"  - {products[it['id']]['name']}
(x{it['quantity']})")
                            print("-" * 40)
                    input("tekan enter... ")

                elif ch in ("2", "3", "4"):
                    print("pilih: 1) tiket  2) merchandise")
                    cat_choice = input("pilih 1 atau 2: ").strip()
                    if cat_choice == "1":
                        products = data["tickets"]
                        ptype = "tiket"
                    elif cat_choice == "2":
                        products = data["merch"]
                        ptype = "merch"
                    else:
                        products = None
                        ptype = None
                        print("pilihan tidak valid.")
                    if not products:
                        print("batal.")
                        input("tekan enter... ")
                        continue

                    print()
                    print("== daftar produk ==")
                    print("{:<3} {:<30} {:>12} {:>8}".format("ID", "Nama",
"Harga (Rp)", "Stok"))
                    print("-" * 60)
                    for ID_Barang in sorted(products.keys()):
                        p = products[ID_Barang]
                        print("{:<3} {:<30} {:>12,} {:>8}".format(ID_Barang,
p["name"], p["price"], p["stock"]))
                    print("-" * 60)

                    s = input("masukkan id produk (kosong = batal):
```

```
").strip()
                    ID_Barang = None
                    if s != "":
                        ss = s
                        if (ss[0] in "+-" and ss[1:].isdigit()) or
ss.isdigit():
                            if ss[0] == "+":
                                ss = ss[1:]
                            ID_Barang = int(ss)
                        else:
                            ID_Barang = None
                    if ID_Barang is None or ID_Barang not in products:
                        print("produk tidak ditemukan atau batal.")
                        input("tekan enter... ")
                        continue

                    if ch == "2":
                        print("produk:", products[ID_Barang]["name"], "harga
sekarang: rp", f"{products[ID_Barang]['price']:,}", sep=" ")
                        s2 = input("harga baru (boleh 0): ").strip()
                        new_price = None
                        if s2 != "":
                            ss2 = s2
                            if (ss2[0] in "+-" and ss2[1:].isdigit()) or
ss2.isdigit():
                                if ss2[0] == "+":
                                    ss2 = ss2[1:]
                                new_price = int(ss2)
                                if new_price < 0:
                                    new_price = None
                            else:
                                new_price = None
                        if new_price is None:
                            print("input tidak valid atau batal.")
                        else:
                            products[ID_Barang]["price"] = new_price
                            print("harga diubah.")
                        input("tekan enter... ")

                    elif ch == "3":
                        print("produk:", products[ID_Barang]["name"], "stok
sekarang:", products[ID_Barang]["stock"])
                        s2 = input("jumlah tambah: ").strip()
                        add = None
                        if s2 != "":
                            ss2 = s2
                            if (ss2[0] in "+-" and ss2[1:].isdigit()) or
ss2.isdigit():
```

```
                                if ss2[0] == "+":
                                    ss2 = ss2[1:]
                                add = int(ss2)
                                if add <= 0:
                                    add = None
                            else:
                                add = None
                        if add is None:
                            print("input tidak valid atau batal.")
                        else:
                            products[ID_Barang]["stock"] += add
                            print("stok ditambah. baru:",
products[ID_Barang]["stock"])
                        input("tekan enter... ")

                    elif ch == "4":
                        print("produk:", products[ID_Barang]["name"], "stok
sekarang:", products[ID_Barang]["stock"])
                        s2 = input("stok baru (>=0): ").strip()
                        new_stock = None
                        if s2 != "":
                            ss2 = s2
                            if (ss2[0] in "+-" and ss2[1:].isdigit()) or
ss2.isdigit():
                                if ss2[0] == "+":
                                    ss2 = ss2[1:]
                                new_stock = int(ss2)
                                if new_stock < 0:
                                    new_stock = None
                            else:
                                new_stock = None
                        if new_stock is None:
                            print("input tidak valid atau batal.")
                        else:
                            products[ID_Barang]["stock"] = new_stock
                            print("stok di-set. sekarang:",
products[ID_Barang]["stock"])
                        input("tekan enter... ")

                elif ch == "5":
                    print("logout.")
                    break
                else:
                    print("pilihan salah.")
                    input("tekan enter... ")

    elif choice == "3":
        print("terima kasih. sampai jumpa.")
```

```
        break
    else:
        print("pilihan salah.")
        input("tekan enter... ")
```

Gambar 1.1 Source Code

4. Hasil Output

4.1 Hasil Output Registrasi

```
 ==| Selamat Datang Di Nürburgring |==
+-------------------------------------+
1. Daftar
2. Login
3. Keluar
pilih: 1

== daftar akun ==
username baru: kris
password baru: bambang
daftar sukses. silakan login sebagai: kris
```

Gambar 1.2 Output Registrasi

4.2 Hasil Output Login Customer

```
 ==| Selamat Datang Di Nürburgring |==
+-------------------------------------+
1. Daftar
2. Login
3. Keluar
pilih: 2

== login ==
username: kris
password: bambang
login sukses. halo, kris
```

Gambar 1.3 Output Login Customer

4.2 Hasil Output Login Admin

```
 ==| Selamat Datang Di Nürburgring |==
+-------------------------------------+
1. Daftar
2. Login
3. Keluar
pilih: 2

== login ==
username: Admin
password: Sufi123
login sukses. halo, Admin
```

Gambar 1.4 Output Login Admin

4.2 Hasil Output Admin Menu

```
== menu admin ==
1. laporan
2. ubah harga
3. tambah stok
4. set stok
5. logout
pilih: 3
pilih: 1) tiket  2) merchandise
pilih 1 atau 2: 2

== daftar produk ==
ID  Nama                            Harga (Rp)     Stok
-------------------------------------------------------------
1   N24H Official T-Shirt            1,200,000      100
2   N24H Cap                           600,000      120
3   N24H Sunglasses                  2,700,000       75
4   Wall Clock (NBR)                   700,000      100
5   Scale Model Car 1:43             1,300,000       75
-------------------------------------------------------------
masukkan id produk (kosong = batal): 3
produk: N24H Sunglasses stok sekarang: 75
jumlah tambah: 25
stok ditambah. baru: 100
```

Gambar 1.5 Output Login Admin Menu

4.2 Hasil Output Customer Menu

```
== menu pelanggan ==
1. beli tiket
2. beli merchandise
3. lihat keranjang
4. checkout
5. logout
pilih: 2

== daftar merchandise ==
ID  Nama                              Harga (Rp)     Stok
-------------------------------------------------------------
1   N24H Official T-Shirt              1,200,000      100
2   N24H Cap                             600,000      120
3   N24H Sunglasses                    2,700,000      100
4   Wall Clock (NBR)                     700,000      100
5   Scale Model Car 1:43               1,300,000       75
-------------------------------------------------------------
masukkan id produk (kosong = batal): 2
jumlah untuk 'N24H Cap' (kosong = batal): 3
berhasil tambah 3 x N24H Cap ke keranjang.
```

Gambar 1.6 Output Login Customer Menu

5. Langkah-langkah GIT

5.1 GIT Add

```
PS C:\Users\acer\Documents\Praktikum_APD_2025_C1> git add .
```

Gambar 1.3 GIT Add

GIT Add digunakan untuk menambahkan file ke *staging area* atau tempat penyimpanan sebelum disimpan secara permanen.

5.2 GIT Commit

```
PS C:\Users\acer\Documents\Praktikum_APD_2025_C1> git commit -m
"Post_Test_APD_6"
[main b88dcd8] Post_Test_APD_6
```

Gambar 1.4 GIT Commit

GIT Commit digunakan untuk menimpan perubahan file yang telah diubah pada GIT *Add.*

5.3 GIT Push

```
PS C:\Users\acer\Documents\Praktikum_APD_2025_C1> git push -u origin
main
Enumerating objects: 13, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 8 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 3.77 KiB | 3.77 MiB/s, done.
Total 7 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), completed with 2 local objects.
To https://github.com/SufiRidhoUtomo/Praktikum_APD_2025_C1.git
   3f69734..cb26c39  main -> main
branch 'main' set up to track 'origin/main'.
```

Gambar 1.5 GIT Push

GIT Push digunakan untuk mengirim perubahan file dari *local repository* ke *Remote* untuk diproses oleh *Remote* untuk dihubungkan menuju *online Repository.*