

CHALLENGE RUN ANALYZER PRO

“Menambahkan fitur untuk menyimpan histori analisis lari dari pengguna sehingga ketika keluar dari aplikasinya, historinya tidak terhapus.”



Oleh:

Nama Kelompok : Kelompok 8

Nama/NIM : Denielson Javier Latuparissa / 25031554065

Kelas : 2025 G

Dosen : Hasanuddin Al-Habib, M.Si

Dr. Heri Purnawan, S.Si., M.Si

Mata Kuliah : Pemrograman Dasa

PROGRAM STUDI S1 SAINS DATA

FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

UNIVERSITAS NEGERI SURABAYA

2025

Challenge yang di berikan:

Menambahkan fitur untuk menyimpan histori analisis lari dari pengguna sehingga ketika keluar dari aplikasinya, historinya tidak terhapus.

Code Lama:

```
import tkinter as tk

from tkinter import ttk, messagebox

from datetime import datetime, date

THEME = {

    "dark": {"bg": "#1e1e2e", "frame": "#2d3047", "card": "#3d405b", "fg": "white"},

#KODE PENTING

    "light": {"bg": "#f4f4f4", "frame": "#ffffff", "card": "#e6e6e6", "fg": "black"}

}

class RunningApp(tk.Tk):      #KODE PENTING (TAMPILAN UTAMA)

    def __init__(self):

        super().__init__()

        self.title("Run Analyzer Pro")

        self.geometry("700x750")

        self.mode = "dark"

        self.vars = {x: tk.StringVar() for x in

["jarak", "waktu", "berat", "target_jarak"]}

        self.history = {}
```

```
self.daily_targets = {}

self.daily_distances = {}

self.make_gui()

self.apply_theme()

def make_gui(self):

    self.title_lbl = tk.Label(self, text="RUN ANALYZER PRO",
font=("Arial",18,"bold"))

    self.title_lbl.pack(pady=20)

self.notebook = ttk.Notebook(self)

self.notebook.pack(expand=True, fill="both", padx=20, pady=10)

self.tabs = {}      #KODE PENTING (TAB FITUR)

for name in ["Input","Hasil","Gizi","Jadwal","History"]:

    self.tabs[name] = ttk.Frame(self.notebook)

    self.notebook.add(self.tabs[name], text=name)

self.make_input_tab()

tk.Button(self, text="Toggle Theme",
command=self.toggle_theme).pack(pady=5)

def apply_theme(self):

    t = THEME[self.mode]
```

```
self.configure(bg=t["bg"])

self.title_lbl.configure(bg=t["bg"], fg=t["fg"])

for tab in self.tabs.values():

    for widget in tab.winfo_children():

        widget.destroy()

    self.make_input_tab()

    if hasattr(self, "pace"):

        self.show_all()

def toggle_theme(self):

    self.mode = "light" if self.mode=="dark" else "dark"

    self.apply_theme()

def make_input_tab(self):

    t = THEME[self.mode]

    f = tk.Frame(self.tabs["Input"], bg=t["frame"], padx=25, pady=25)

    f.pack(expand=True, fill="both")

    labels = ["Jarak (km)", "Waktu (menit)", "Berat (kg)", "Target Jarak Harian
(km)"]      #KODE PENTING (INPUT DATA)

    keys = ["jarak", "waktu", "berat", "target_jarak"]

    for label, key in zip(labels, keys):
```

```

tk.Label(f, text=label, bg=t["frame"], fg=t["fg"]).pack(anchor="w",
pady=(5,0))

tk.Entry(f, textvariable=self.vars[key], font=("Arial",12),
bg=t["card"], fg=t["fg"]).pack(fill="x", pady=3)

tk.Button(f, text="Analisis", command=self.analyze,
bg="#ff6b6b", fg="white", font=("Arial",11,"bold"),
pady=8).pack(fill="x", pady=20)

def analyze(self):

    try:

        j = float(self.vars["jarak"].get())    #KODE PENTING (PERHITUNGAN)

        w = float(self.vars["waktu"].get())

        b = float(self.vars["berat"].get())

        t = float(self.vars["target_jarak"].get()) if
self.vars["target_jarak"].get().strip() else None

        if min(j,w,b) <= 0: raise ValueError

        if t is not None and t <= 0: raise ValueError

    except:

        return messagebox.showerror("Error","Input tidak valid!")

today = date.today().strftime("%Y-%m-%d")

self.pace = w/j

self.speed = (j/w)*60

```

```
self.kal = j*b*0.653
```

```
if t is not None:
```

```
    self.daily_targets[today] = t
```

```
    self.target_jarak = t
```

```
else:
```

```
if today in self.daily_targets:
```

```
    self.target_jarak = self.daily_targets[today]
```

```
elif hasattr(self, 'target_jarak'):
```

```
    self.daily_targets[today] = self.target_jarak
```

```
else:
```

```
    self.target_jarak = 0
```

```
if today not in self.daily_distances:
```

```
    self.daily_distances[today] = 0
```

```
    self.daily_distances[today] += j
```

```
total_jarak_hari_ini = self.daily_distances[today] #KODE PENTING
```

```
(RIWAYAT HISTORY)
```

```
if today not in self.history:
```

```
self.history[today] = []

self.history[today].append({
    "time": datetime.now().strftime("%H:%M"),
    "jarak": j,
    "waktu": w,
    "pace": self.pace,
    "speed": self.speed,
    "kal": self.kal,
    "target": self.target_jarak,
    "total_jarak_harian": total_jarak_hari_ini
})

self.show_all()
self.notebook.select(1)

def show_all(self):
    self.show_hasil()
    self.show_gizi()
    self.show_jadwal()
    self.show_history()

def show_hasil(self):
```

```
t = THEME[self.mode]

tab = self.tabs["Hasil"]

for w in tab.winfo_children(): w.destroy()

f = tk.Frame(tab, bg=t["frame"], padx=25, pady=25)

f.pack(fill="both", expand=True)

tk.Label(f, text="HASIL ANALISIS", bg=t["frame"],
fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,20))

data = [      #KODE PENTING (HASIL)
("Pace", f"{self.pace:.2f} menit/km"),
("Kecepatan", f"{self.speed:.1f} km/jam"),
("Kalori Terbakar", f"{self.kal:.0f} kalori")
]

]
```

for label, value in data:

```
frame = tk.Frame(f, bg=t["card"], padx=15, pady=10)

frame.pack(fill="x", pady=5)

tk.Label(frame, text=label, bg=t["card"], fg=t["fg"],
font=("Arial",11)).pack(side="left")

tk.Label(frame, text=value, bg=t["card"], fg="#4ecdc4",
font=("Arial",11,"bold")).pack(side="right")
```

```
def show_gizi(self):

    t = THEME[self.mode]

    tab = self.tabs["Gizi"]

    for w in tab.winfo_children(): w.destroy()

    main_frame = tk.Frame(tab, bg=t["frame"])

    main_frame.pack(fill="both", expand=True)

    canvas = tk.Canvas(main_frame, bg=t["frame"], highlightthickness=0)

    scrollbar = ttk.Scrollbar(main_frame, orient="vertical",
        command=canvas.yview)

    scrollable_frame = tk.Frame(canvas, bg=t["frame"], width=650)

    scrollable_frame.bind(
        "<Configure>",
        lambda e: canvas.configure(scrollregion=canvas.bbox("all"))

    )

    canvas.create_window((0, 0), window=scrollable_frame, anchor="nw")

    canvas.configure(yscrollcommand=scrollbar.set)

    canvas.pack(side="left", fill="both", expand=True, padx=(25,0), pady=25)
```

```
scrollbar.pack(side="right", fill="y", pady=25)

def _on_mousewheel(event):
    canvas.yview_scroll(int(-1*(event.delta/120)), "units")

canvas.bind_all("<MouseWheel>", _on_mousewheel)

container = tk.Frame(scrollable_frame, bg=t["frame"])
container.pack(expand=True, fill="both", padx=20, pady=10)

tk.Label(container, text="PROGRES & NUTRISI", bg=t["frame"],
         fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,25))

if hasattr(self, 'target_jarak') and self.target_jarak > 0:
    today = date.today().strftime("%Y-%m-%d")

    current_target = self.daily_targets.get(today, self.target_jarak)

    total_jarak_hari_ini = self.daily_distances.get(today, 0)

    jarak_sekarang = float(self.vars["jarak"].get())
```

```
sisa_jarak = current_target - total_jarak_hari_ini  
persentase = (total_jarak_hari_ini / current_target) * 100 if current_target  
> 0 else 0
```

```
progress_container = tk.Frame(container, bg=t["frame"])
```

```
progress_container.pack(fill="x", pady=(0,20))
```

```
tk.Label(progress_container, text="PROGRES TARGET LARI  
HARIAN", bg=t["frame"],
```

```
fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(0,15))
```

```
data_progres = [
```

```
("Target Harian", f"{current_target:.1f} km"),
```

```
("Jarak Hari Ini", f"{total_jarak_hari_ini:.1f} km"),
```

```
("Sisa Jarak", f"{abs(sisa_jarak):.2f} km"),
```

```
("Persentase", f"{persentase:.1f}%")
```

```
]
```

```
progress_grid = tk.Frame(progress_container, bg=t["frame"])
```

```
progress_grid.pack()
```

```
for i, (label, value) in enumerate(data_progres):
    row_frame = tk.Frame(progress_grid, bg=t["card"], padx=25, pady=12)
    row_frame.grid(row=i, column=0, sticky="ew", pady=3, padx=50)

    tk.Label(row_frame, text=label, bg=t["card"], fg=t["fg"],
             font=("Arial",11), width=20, anchor="center").pack(side="left",
             expand=True)

    tk.Label(row_frame, text=":", bg=t["card"], fg=t["fg"],
             font=("Arial",11), padx=10).pack(side="left")

    tk.Label(row_frame, text=value, bg=t["card"], fg="#4ecdc4",
             font=("Arial",11,"bold"), width=15,
             anchor="center").pack(side="left", expand=True)

status_container = tk.Frame(container, bg=t["card"], padx=30, pady=15)
status_container.pack(fill="x", pady=15, padx=80)

if sisa_jarak <= 0:
```



```
tk.Label(container, text="KALORI TERBAKAR", bg=t["frame"],  
fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(20,10))  
  
  
kal_container = tk.Frame(container, bg=t["card"], padx=30, pady=15)  
kal_container.pack(fill="x", pady=5, padx=150)  
  
tk.Label(kal_container, text=f" {self.kal:.0f} kalori", bg=t["card"],  
fg="#ff6b6b",  
font=("Arial",14,"bold")).pack()  
  
  
  
  
info_frame = tk.Frame(container, bg=t["card"], padx=15, pady=10)  
info_frame.pack(fill="x", pady=10, padx=80)  
  
tk.Label(info_frame, text=f"Input terbaru: {jarak_sekarang:.1f} km pada  
{datetime.now().strftime('%H:%M')}",  
bg=t["card"], fg="#888", font=("Arial",9)).pack()  
  
  
  
  
tk.Label(container, text="REKOMENDASI NUTRISI", bg=t["frame"],  
fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(25,15))  
  
  
  
makanan = [  
    ("Dada Ayam (100g)", "31g protein", "Protein tinggi, rendah lemak"),  
    ("Telur (2 butir)", "13g protein", "Protein lengkap, mudah dicerna"),  
    ("Salmon (100g)", "25g protein", "Protein + Omega-3"),
```

```
("Tahu (100g)", "8g protein", "Protein nabati"),  
("Nasi Merah (100g)", "23g karbo", "Karbohidrat kompleks"),  
("Oatmeal (50g)", "30g karbo", "Serat tinggi, energi tahan lama"),  
("Ubi (100g)", "20g karbo", "Vitamin A, karbo sehat"),  
("Pisang (1 buah)", "27g karbo", "Kalium, energi cepat")
```

```
]
```

```
makanan_container = tk.Frame(container, bg=t["frame"])
```

```
makanan_container.pack(fill="x", padx=50)
```

```
for i, (nama, nutrisi, desc) in enumerate(makanan):
```

```
    frame = tk.Frame(makanan_container, bg=t["card"], padx=15, pady=10)  
    frame.pack(fill="x", pady=4)
```

```
    content_frame = tk.Frame(frame, bg=t["card"])
```

```
    content_frame.pack(expand=True)
```

```
    tk.Label(content_frame, text=nama, bg=t["card"], fg=t["fg"],
```

```
        font=("Arial",10,"bold"), width=25).pack(pady=(0,5))
```

```
    nutrisi_frame = tk.Frame(content_frame, bg=t["card"])
```

```
nutrisi_frame.pack()

tk.Label(nutrisi_frame, text=nutrisi, bg=t["card"], fg="#ff6b6b",
         font=("Arial",9,"bold"), width=20).pack(side="left", padx=(0,10))

tk.Label(nutrisi_frame, text=desc, bg=t["card"], fg="#888",
         font=("Arial",9), wraplength=200,
         justify="center").pack(side="left")

tk.Label(container, text="TIPS CEPAT", bg=t["frame"],
         fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(25,10))

tips = [
    "Protein dalam 30 menit setelah lari",
    "Minum air 500ml setiap 30 menit lari",
    "Karbohidrat kompleks sebelum lari",
    "Hindari makanan berat 2 jam sebelum lari"]

tips_container = tk.Frame(container, bg=t["frame"])
tips_container.pack(fill="x", padx=100)

for tip in tips:
```

```
frame = tk.Frame(tips_container, bg=t["card"], padx=15, pady=8)

frame.pack(fill="x", pady=3)

tk.Label(frame, text=f'✓ {tip}', bg=t["card"], fg="#4ecdc4",
        font=("Arial",9)).pack(anchor="center")

else:

    message_frame = tk.Frame(container, bg=t["frame"], padx=20, pady=40)

    message_frame.pack(expand=True, fill="both")

    tk.Label(message_frame, text="Masukkan target jarak harian di tab Input",
            bg=t["frame"], fg=t["fg"], font=("Arial",11)).pack(expand=True)

    tk.Label(message_frame, text="Target akan digunakan untuk menghitung
progres harian",
            bg=t["frame"], fg="#888", font=("Arial",9)).pack()

def show_jadwal(self):

    t = THEME[self.mode]

    tab = self.tabs["Jadwal"]

    for w in tab.winfo_children(): w.destroy()

    f = tk.Frame(tab, bg=t["frame"], padx=25, pady=25)

    f.pack(fill="both", expand=True)

    tk.Label(f, text="JADWAL LATIHAN", bg=t["frame"],
            fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,20))
```

```
hari = ["Senin", "Selasa", "Rabu", "Kamis", "Jumat", "Sabtu", "Minggu"]  
jadwal = [  
    ("Lari Ringan", "30 menit", "Pemanasan"),  
    ("Interval Run", "45 menit", "Kecepatan"),  
    ("Recovery", "20 menit", "Pemulihan"),  
    ("Long Run", "60 menit", "Daya tahan"),  
    ("Cross Training", "40 menit", "Variasi"),  
    ("Tempo Run", "50 menit", "Konsistensi"),  
    ("Rest Day", "-", "Pemulihan total")  
]
```

```
for i, (latihan, durasi, tipe) in enumerate(jadwal):  
    frame = tk.Frame(f, bg=t["card"], padx=15, pady=10)  
    frame.pack(fill="x", pady=4)  
  
    tk.Label(frame, text=hari[i], bg=t["card"], fg=t["fg"],  
            font=("Arial",11,"bold"), width=8).pack(side="left", padx=(0,10))  
  
    tk.Label(frame, text=latihan, bg=t["card"], fg="#4ecdc4",  
            font=("Arial",11,"bold"), width=15).pack(side="left", padx=(0,10))
```

```
tk.Label(frame, text=f"\{durasi\} | \{tipe\}", bg=t["card"], fg=t["fg"],  
font=("Arial",10)).pack(side="left")  
  
color = "#ff6b6b" if i % 3 == 0 else "#4ecdc4" if i % 3 == 1 else "#ffd166"  
tk.Label(frame, text="●", bg=t["card"], fg=color,  
font=("Arial",12)).pack(side="right")  
  
  
  
def show_history(self):  
    t = THEME[self.mode]  
    tab = self.tabs["History"]  
    for w in tab.winfo_children(): w.destroy()  
  
  
  
    f = tk.Frame(tab, bg=t["frame"], padx=25, pady=25)  
    f.pack(fill="both", expand=True)  
  
  
  
    tk.Label(f, text="Riwayat Analisis", bg=t["frame"],  
fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,20))  
  
  
  
    if not self.history:  
        tk.Label(f, text="Belum ada riwayat", fg=t["fg"], bg=t["frame"]).pack()  
    return
```

```
dates_frame = tk.Frame(f, bg=t["frame"])

dates_frame.pack(anchor="center")

row_frame = None

for i, tanggal in enumerate(sorted(self.history.keys(), reverse=True)):

    if i % 3 == 0:

        row_frame = tk.Frame(dates_frame, bg=t["frame"])

        row_frame.pack(anchor="center", pady=6)

    btn = tk.Button(

        row_frame, text=tanggal,

        command=lambda tgl=tanggal: self.show_date_detail(tgl),

        bg=t["card"], fg=t["fg"], font=("Arial",10),

        relief="flat", padx=18, pady=8, cursor="hand2"

    )

    btn.pack(side="left", padx=6)

    btn.bind("<Enter>", lambda e, b=btn: b.config(bg="#444444" if

self.mode=="dark" else "#dddddd"))

    btn.bind("<Leave>", lambda e, b=btn: b.config(bg=t["card"]))

def show_date_detail(self, tanggal):

    detail = tk.Toplevel(self)

    detail.title(f"Detail {tanggal}")
```

```
detail.geometry("600x450")

t = THEME[self.mode]

detail.configure(bg=t["bg"])

main_frame = tk.Frame(detail, bg=t["bg"])

main_frame.pack(expand=True, fill="both")

tk.Label(main_frame, text=f"Detail Tanggal {tanggal}", bg=t["bg"],
fg="#ffd166",
font=("Arial",14,"bold")).pack(pady=15)

center_frame = tk.Frame(main_frame, bg=t["bg"])

center_frame.pack(expand=True)

container = tk.Frame(center_frame, bg=t["frame"], padx=20, pady=20)

container.pack()

target_harian = self.daily_targets.get(tanggal, "Tidak ada target")

total_jarak = self.daily_distances.get(tanggal, 0)
```

```
target_frame = tk.Frame(container, bg=t["card"], padx=10, pady=8)

target_frame.pack(fill="x", pady=5)

tk.Label(target_frame, text=f"Target Harian: {target_harian} km | Total
Jarak: {total_jarak:.1f} km",
        bg=t["card"], fg=t["fg"], font=("Arial",10, "bold")).pack()
```

```
for item in self.history[tanggal]:
```

```
    row_frame = tk.Frame(container, bg=t["card"], padx=10, pady=8)

    row_frame.pack(fill="x", pady=4)

    info = f" {item['time']} | {item['jarak']}km | {item['waktu']}m | Pace
{item['pace']:.2f} | {item['kal']:.0f} cal"
```

```
    label = tk.Label(row_frame, text=info, bg=t["card"], fg=t["fg"],
                     font=("Arial",10))

    label.pack(expand=True)
```

```
RunningApp().mainloop() #KODE PENTING
```

Code Setelah Di Sesuaikan:

```
import tkinter as tk

from tkinter import ttk, messagebox

from datetime import datetime, date

import json

import os

THEME = {

    "dark": {"bg": "#1e1e2e", "frame": "#2d3047", "card": "#3d405b", "fg": "white"},

    "light": {"bg": "#f4f4f4", "frame": "#ffffff", "card": "#e6e6e6", "fg": "black"}
}

DATA_FILE = "running_data.json"

class RunningApp(tk.Tk):

    def __init__(self):
        super().__init__()

        self.title("Run Analyzer Pro")
        self.geometry("700x750")

        self.mode = "dark"

        self.vars = {x: tk.StringVar() for x in
                    ["jarak", "waktu", "berat", "target_jarak"]}
```

```
self.history = {}

self.daily_targets = {}

self.daily_distances = {}

self.load_data()

self.make_gui()

self.apply_theme()

self.protocol("WM_DELETE_WINDOW", self.on_closing)

def load_data(self):
    """Memuat data dari file JSON"""

    try:
        if os.path.exists(DATA_FILE):
            with open(DATA_FILE, 'r') as f:
                data = json.load(f)

                self.history = data.get("history", {})
                self.daily_targets = data.get("daily_targets", {})
                self.daily_distances = data.get("daily_distances", {})
```

```
except Exception as e:  
    print(f"Error loading data: {e}")  
  
self.history = {}  
self.daily_targets = {}  
self.daily_distances = {}  
  
  
def save_data(self):  
    """Menyimpan data ke file JSON"""  
    try:  
        data = {  
            "history": self.history,  
            "daily_targets": self.daily_targets,  
            "daily_distances": self.daily_distances  
        }  
        with open(DATA_FILE, 'w') as f:  
            json.dump(data, f, indent=2)  
    except Exception as e:  
        print(f"Error saving data: {e}")  
  
  
def on_closing(self):  
    """Handler saat aplikasi ditutup"""
```

```
self.save_data()

self.destroy()

def make_gui(self):
    self.title_lbl = tk.Label(self, text="RUN ANALYZER PRO",
    font=("Arial",18,"bold"))

    self.title_lbl.pack(pady=20)

    self.notebook = ttk.Notebook(self)

    self.notebook.pack(expand=True, fill="both", padx=20, pady=10)

    self.tabs = {}

    for name in ["Input","Hasil","Gizi","Jadwal","History"]:

        self.tabs[name] = ttk.Frame(self.notebook)

        self.notebook.add(self.tabs[name], text=name)

    self.make_input_tab()

button_frame = tk.Frame(self, bg=THEME[self.mode]["bg"])

button_frame.pack(pady=5)

tk.Button(button_frame, text="Toggle Theme", command=self.toggle_theme,
```

```
        bg="#4ecdc4", fg="white", font=("Arial",10),  
        padx=15).pack(side="left", padx=5)  
  
tk.Button(button_frame, text="Clear History", command=self.clear_history,  
        bg="#ff6b6b", fg="white", font=("Arial",10),  
        padx=15).pack(side="left", padx=5)
```

```
def clear_history(self):  
    """Menghapus semua data history"""  
  
    if messagebox.askyesno("Konfirmasi", "Apakah Anda yakin ingin  
menghapus semua history?"):  
  
        self.history = {}  
  
        self.daily_targets = {}  
  
        self.daily_distances = {}  
  
        self.save_data()  
  
        self.show_history()  
  
        messagebox.showinfo("Sukses", "Semua history telah dihapus!")
```

```
def apply_theme(self):  
    t = THEME[self.mode]  
  
    self.configure(bg=t["bg"])  
  
    self.title_lbl.configure(bg=t["bg"], fg=t["fg"])  
  
    for tab in self.tabs.values():  
  
        for widget in tab.winfo_children():
```

```
    widget.destroy()

    self.make_input_tab()

    if hasattr(self, "pace"):

        self.show_all()

def toggle_theme(self):

    self.mode = "light" if self.mode=="dark" else "dark"

    self.apply_theme()

def make_input_tab(self):

    t = THEME[self.mode]

    f = tk.Frame(self.tabs["Input"], bg=t["frame"], padx=25, pady=25)

    f.pack(expand=True, fill="both")

    labels = ["Jarak (km)", "Waktu (menit)", "Berat (kg)", "Target Jarak Harian
              (km)"]

    keys = ["jarak", "waktu", "berat", "target_jarak"]

    for label, key in zip(labels, keys):

        tk.Label(f, text=label, bg=t["frame"], fg=t["fg"]).pack(anchor="w",
                                                               pady=(5,0))

        tk.Entry(f, textvariable=self.vars[key], font=("Arial",12),
                 bg=t["card"], fg=t["fg"]).pack(fill="x", pady=3)
```

```
tk.Button(f, text="Analisis", command=self.analyze,  
bg="#ff6b6b", fg="white", font=("Arial",11,"bold"),  
pady=8).pack(fill="x", pady=20)  
  
  
def analyze(self):  
    try:  
        j = float(self.vars["jarak"].get())  
        w = float(self.vars["waktu"].get())  
        b = float(self.vars["berat"].get())  
        t = float(self.vars["target_jarak"].get()) if  
self.vars["target_jarak"].get().strip() else None  
        if min(j,w,b) <= 0: raise ValueError  
        if t is not None and t <= 0: raise ValueError  
  
    except:  
        return messagebox.showerror("Error","Input tidak valid!")  
  
  
today = date.today().strftime("%Y-%m-%d")  
self.pace = w/j  
self.speed = (j/w)*60  
self.kal = j*b*0.653  
  
  
if t is not None:  
    self.daily_targets[today] = t  
self.target_jarak = t
```

```
else:  
    if today in self.daily_targets:  
        self.target_jarak = self.daily_targets[today]  
  
    elif hasattr(self, 'target_jarak'):  
        self.daily_targets[today] = self.target_jarak  
  
    else:  
        self.target_jarak = 0  
  
  
if today not in self.daily_distances:  
    self.daily_distances[today] = 0  
  
    self.daily_distances[today] += j  
  
  
total_jarak_hari_ini = self.daily_distances[today]  
  
  
if today not in self.history:  
    self.history[today] = []  
  
  
self.history[today].append({  
    "time": datetime.now().strftime("%H:%M"),  
    "jarak": j,  
    "waktu": w,  
    "pace": self.pace,  
    "speed": self.speed,
```

```
"kal": self.kal,  
"target": self.target_jarak,  
"total_jarak_harian": total_jarak_hari_ini  
})
```

```
self.save_data()
```

```
self.show_all()  
self.notebook.select(1)
```

```
def show_all(self):  
    self.show_hasil()  
    self.show_gizi()  
    self.show_jadwal()  
    self.show_history()
```

```
def show_hasil(self):  
    t = THEME[self.mode]  
    tab = self.tabs["Hasil"]  
    for w in tab.winfo_children(): w.destroy()
```

```
f = tk.Frame(tab, bg=t["frame"], padx=25, pady=25)
```

```
f.pack(fill="both", expand=True)

tk.Label(f, text="HASIL ANALISIS", bg=t["frame"],
         fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,20))
```

```
data = [
    ("Pace", f" {self.pace:.2f} menit/km"),
    ("Kecepatan", f" {self.speed:.1f} km/jam"),
    ("Kalori Terbakar", f" {self.kal:.0f} kalori")
]
```

for label, value in data:

```
frame = tk.Frame(f, bg=t["card"], padx=15, pady=10)
frame.pack(fill="x", pady=5)

tk.Label(frame, text=label, bg=t["card"], fg=t["fg"],
         font=("Arial",11)).pack(side="left")

tk.Label(frame, text=value, bg=t["card"], fg="#4ecdc4",
         font=("Arial",11,"bold")).pack(side="right")
```

```
def show_gizi(self):
```

```
t = THEME[self.mode]
tab = self.tabs["Gizi"]

for w in tab.winfo_children(): w.destroy()
```

```
main_frame = tk.Frame(tab, bg=t["frame"])

main_frame.pack(fill="both", expand=True)

canvas = tk.Canvas(main_frame, bg=t["frame"], highlightthickness=0)

scrollbar = ttk.Scrollbar(main_frame, orient="vertical",
command=canvas.yview)

scrollable_frame = tk.Frame(canvas, bg=t["frame"], width=650)

scrollable_frame.bind(
    "<Configure>",
    lambda e: canvas.configure(scrollregion=canvas.bbox("all"))

)

canvas.create_window((0, 0), window=scrollable_frame, anchor="nw")

canvas.configure(yscrollcommand=scrollbar.set)

scrollable_frame.pack(side="left", fill="both", expand=True, padx=(25,0), pady=25)

scrollbar.pack(side="right", fill="y", pady=25)

def _on_mousewheel(event):
    canvas.yview_scroll(int(-1*(event.delta/120)), "units")

canvas.bind_all("<MouseWheel>", _on_mousewheel)
```

```
container = tk.Frame(scrollable_frame, bg=t["frame"])

container.pack(expand=True, fill="both", padx=20, pady=10)

tk.Label(container, text="PROGRES & NUTRISI", bg=t["frame"],

fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,25))

if hasattr(self, 'target_jarak') and self.target_jarak > 0:

    today = date.today().strftime("%Y-%m-%d")

    current_target = self.daily_targets.get(today, self.target_jarak)

    total_jarak_hari_ini = self.daily_distances.get(today, 0)

    jarak_sekarang = float(self.vars["jarak"].get())

    sisa_jarak = current_target - total_jarak_hari_ini

    persentase = (total_jarak_hari_ini / current_target) * 100 if current_target

    > 0 else 0

progress_container = tk.Frame(container, bg=t["frame"])

progress_container.pack(fill="x", pady=(0,20))
```

```
tk.Label(progress_container, text="PROGRES TARGET LARI  
HARIAN", bg=t["frame"],
```

```
fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(0,15))
```

```
data_progres = [
```

```
("Target Harian", f'{current_target:.1f} km'),
```

```
("Jarak Hari Ini", f'{total_jarak_hari_ini:.1f} km'),
```

```
("Sisa Jarak", f'{abs(sisa_jarak):.2f} km'),
```

```
("Persentase", f'{persentase:.1f}%')
```

```
]
```

```
progress_grid = tk.Frame(progress_container, bg=t["frame"])
```

```
progress_grid.pack()
```

```
for i, (label, value) in enumerate(data_progres):
```

```
row_frame = tk.Frame(progress_grid, bg=t["card"], padx=25, pady=12)
```

```
row_frame.grid(row=i, column=0, sticky="ew", pady=3, padx=50)
```

```
tk.Label(row_frame, text=label, bg=t["card"], fg=t["fg"],
```

```
font=("Arial",11), width=20, anchor="center").pack(side="left",
```

```
expand=True)
```

```
tk.Label(row_frame, text=":", bg=t["card"], fg=t["fg"],
```

```
font=("Arial",11), padx=10).pack(side="left")
```

```
tk.Label(row_frame, text=value, bg=t["card"], fg="#4ecdc4",
         font=("Arial",11,"bold"), width=15,
         anchor="center").pack(side="left", expand=True)

status_container = tk.Frame(container, bg=t["card"], padx=30, pady=15)
status_container.pack(fill="x", pady=15, padx=80)

if sisa_jarak <= 0:
    tk.Label(status_container, text="🎯 TARGET HARIAN TERCAPAI!",
             bg=t["card"], fg="#4ecdc4",
             font=("Arial",12,"bold")).pack()

    tk.Label(status_container, text=f"Total lari hari ini:
{total_jarak_hari_ini:.1f} km (Target: {current_target:.1f} km)",
             bg=t["card"], fg="#4ecdc4", font=("Arial",10)).pack(pady=(5,0))

if total_jarak_hari_ini > current_target:
    excess = total_jarak_hari_ini - current_target
    tk.Label(status_container, text=f"⭐ Anda telah melewati target
harian sebesar {excess:.1f} km!",
             bg=t["card"], fg="#ffd166", font=("Arial",10,
             "bold")).pack(pady=(5,0))

else:
    tk.Label(status_container, text="❗ BELUM TERCAPAI",
             bg=t["card"], fg="#ff6b6b",
```

```
        font=("Arial",12,"bold")).pack()

    tk.Label(status_container, text=f"Kurang {sisa_jarak:.2f} km untuk
capai target harian",

        bg=t["card"], fg="#ff6b6b", font=("Arial",10)).pack(pady=(5,0))

    tk.Label(status_container, text=f"Progress: {persentase:.1f}% dari
{current_target:.1f} km",
        bg=t["card"], fg="#888", font=("Arial",9)).pack(pady=(2,0))

tk.Label(container, text="KALORI TERBAKAR", bg=t["frame"],
        fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(20,10))

kal_container = tk.Frame(container, bg=t["card"], padx=30, pady=15)

kal_container.pack(fill="x", pady=5, padx=150)

tk.Label(kal_container, text=f"{self.kal:.0f} kalori", bg=t["card"],
        fg="#ff6b6b",
        font=("Arial",14,"bold")).pack()

info_frame = tk.Frame(container, bg=t["card"], padx=15, pady=10)

info_frame.pack(fill="x", pady=10, padx=80)

tk.Label(info_frame, text=f"Input terbaru: {jarak_sekarang:.1f} km pada
{datetime.now().strftime('%H:%M')}",

        bg=t["card"], fg="#888", font=("Arial",9)).pack()

tk.Label(container, text="REKOMENDASI NUTRISI", bg=t["frame"],
        fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(25,15))
```

```
makanan = [  
    ("Dada Ayam (100g)", "31g protein", "Protein tinggi, rendah lemak"),  
    ("Telur (2 butir)", "13g protein", "Protein lengkap, mudah dicerna"),  
    ("Salmon (100g)", "25g protein", "Protein + Omega-3"),  
    ("Tahu (100g)", "8g protein", "Protein nabati"),  
    ("Nasi Merah (100g)", "23g karbo", "Karbohidrat kompleks"),  
    ("Oatmeal (50g)", "30g karbo", "Serat tinggi, energi tahan lama"),  
    ("Ubi (100g)", "20g karbo", "Vitamin A, karbo sehat"),  
    ("Pisang (1 buah)", "27g karbo", "Kalium, energi cepat")  
]
```

```
makanan_container = tk.Frame(container, bg=t["frame"])  
makanan_container.pack(fill="x", padx=50)  
  
for i, (nama, nutrisi, desc) in enumerate(makanan):  
    frame = tk.Frame(makanan_container, bg=t["card"], padx=15, pady=10)  
    frame.pack(fill="x", pady=4)  
  
    content_frame = tk.Frame(frame, bg=t["card"])  
    content_frame.pack(expand=True)  
  
    tk.Label(content_frame, text=nama, bg=t["card"], fg=t["fg"],
```

```
font=("Arial",10,"bold"), width=25).pack(pady=(0,5))

nutrisi_frame = tk.Frame(content_frame, bg=t["card"])

nutrisi_frame.pack()

tk.Label(nutrisi_frame, text=nutrisi, bg=t["card"], fg="#ff6b6b",
         font=("Arial",9,"bold"), width=20).pack(side="left", padx=(0,10))

tk.Label(nutrisi_frame, text=desc, bg=t["card"], fg="#888",
         font=("Arial",9), wraplength=200,
         justify="center").pack(side="left")

tk.Label(container, text="TIPS CEPAT", bg=t["frame"],
         fg=t["fg"], font=("Arial",12,"bold")).pack(pady=(25,10))

tips = [
    "Protein dalam 30 menit setelah lari",
    "Minum air 500ml setiap 30 menit lari",
    "Karbohidrat kompleks sebelum lari",
    "Hindari makanan berat 2 jam sebelum lari"]

tips_container = tk.Frame(container, bg=t["frame"])

tips_container.pack(fill="x", padx=100)
```

```
for tip in tips:  
  
    frame = tk.Frame(tips_container, bg=t["card"], padx=15, pady=8)  
  
    frame.pack(fill="x", pady=3)  
  
    tk.Label(frame, text=f'✓ {tip}', bg=t["card"], fg="#4ecdc4",  
             font=("Arial",9)).pack(anchor="center")  
  
else:  
  
    message_frame = tk.Frame(container, bg=t["frame"], padx=20, pady=40)  
  
    message_frame.pack(expand=True, fill="both")  
  
    tk.Label(message_frame, text="Masukkan target jarak harian di tab Input",  
            bg=t["frame"], fg=t["fg"], font=("Arial",11)).pack(expand=True)  
  
    tk.Label(message_frame, text="Target akan digunakan untuk menghitung  
progres harian",  
            bg=t["frame"], fg="#888", font=("Arial",9)).pack()  
  
  
  
def show_jadwal(self):  
  
    t = THEME[self.mode]  
  
    tab = self.tabs["Jadwal"]  
  
    for w in tab.winfo_children(): w.destroy()  
  
  
  
    f = tk.Frame(tab, bg=t["frame"], padx=25, pady=25)  
  
    f.pack(fill="both", expand=True)  
  
  
  
    tk.Label(f, text="JADWAL LATIHAN", bg=t["frame"],
```

```
fg="#ffd166", font=("Arial",14,"bold")).pack(pady=(0,20))
```

```
hari = ["Senin", "Selasa", "Rabu", "Kamis", "Jumat", "Sabtu", "Minggu"]
```

```
jadwal = [
```

```
    ("Lari Ringan", "30 menit", "Pemanasan"),
```

```
    ("Interval Run", "45 menit", "Kecepatan"),
```

```
    ("Recovery", "20 menit", "Pemulihan"),
```

```
    ("Long Run", "60 menit", "Daya tahan"),
```

```
    ("Cross Training", "40 menit", "Variasi"),
```

```
    ("Tempo Run", "50 menit", "Konsistensi"),
```

```
    ("Rest Day", "-", "Pemulihan total")
```

```
]
```

```
for i, (latihan, durasi, tipe) in enumerate(jadwal):
```

```
    frame = tk.Frame(f, bg=t["card"], padx=15, pady=10)
```

```
    frame.pack(fill="x", pady=4)
```

```
    tk.Label(frame, text=hari[i], bg=t["card"], fg=t["fg"],
```

```
        font=("Arial",11,"bold"), width=8).pack(side="left", padx=(0,10))
```

```
    tk.Label(frame, text=latihan, bg=t["card"], fg="#4ecdc4",
```

```
        font=("Arial",11,"bold"), width=15).pack(side="left", padx=(0,10))
```

```
tk.Label(frame, text=f"\{durasi\} | {tipe}", bg=t["card"], fg=t["fg"],  
font=("Arial",10)).pack(side="left")  
  
color = "#ff6b6b" if i % 3 == 0 else "#4ecdc4" if i % 3 == 1 else "#ffd166"  
tk.Label(frame, text="●", bg=t["card"], fg=color,  
font=("Arial",12)).pack(side="right")  
  
def show_history(self):  
    t = THEME[self.mode]  
    tab = self.tabs["History"]  
    for w in tab.winfo_children(): w.destroy()  
  
    f = tk.Frame(tab, bg=t["frame"], padx=25, pady=25)  
    f.pack(fill="both", expand=True)  
  
    header_frame = tk.Frame(f, bg=t["frame"])  
    header_frame.pack(fill="x", pady=(0,20))  
  
    tk.Label(header_frame, text="Riwayat Analisis", bg=t["frame"],  
fg="#ffd166", font=("Arial",14,"bold")).pack(side="left")
```

```
total_days = len(self.history)

if total_days > 0:

    total_runs = sum(len(runs) for runs in self.history.values())

    info_text = f"({total_days} hari, {total_runs} sesi lari)"

    tk.Label(header_frame, text=info_text, bg=t["frame"],
             fg="#888", font=("Arial",10)).pack(side="left", padx=(10,0))

if not self.history:

    no_data_frame = tk.Frame(f, bg=t["frame"], pady=50)

    no_data_frame.pack(expand=True)

    tk.Label(no_data_frame, text="Belum ada riwayat lari", fg=t["fg"],
             bg=t["frame"], font=("Arial",11)).pack()

    tk.Label(no_data_frame, text="Mulai dengan menginput data di tab
'Input'",

             fg="#888", bg=t["frame"], font=("Arial",9)).pack(pady=(10,0))

    return

dates_frame = tk.Frame(f, bg=t["frame"])

dates_frame.pack(anchor="center")

row_frame = None

dates_list = sorted(self.history.keys(), reverse=True)

for i, tanggal in enumerate(dates_list):
```

```
if i % 3 == 0:

    row_frame = tk.Frame(dates_frame, bg=t["frame"])

    row_frame.pack(anchor="center", pady=6)

num_runs = len(self.history[tanggal])

btn = tk.Button(
    row_frame, text=f'{tanggal}\n({num_runs} sesi)',
    command=lambda tgl=tanggal: self.show_date_detail(tgl),
    bg=t["card"], fg=t["fg"], font=("Arial",10),
    relief="flat", padx=20, pady=10, cursor="hand2",
    width=12, height=2
)

btn.pack(side="left", padx=6)

btn.bind("<Enter>", lambda e, b=btn: b.config(bg="#444444" if
self.mode=="dark" else "#dddddd"))

btn.bind("<Leave>", lambda e, b=btn: b.config(bg=t["card"]))

def show_date_detail(self, tanggal):
    detail = tk.Toplevel(self)
    detail.title(f'Detail {tanggal}')
    detail.geometry("600x500")
```

```
t = THEME[self.mode]

detail.configure(bg=t["bg"])

    detail.protocol("WM_DELETE_WINDOW", lambda:
self.close_detail_window(detail))

main_frame = tk.Frame(detail, bg=t["bg"])

main_frame.pack(expand=True, fill="both")

header_frame = tk.Frame(main_frame, bg=t["bg"])

header_frame.pack(fill="x", pady=(10,15))

tk.Label(header_frame, text=f"Detail Tanggal: {tanggal}", bg=t["bg"],
fg="#ffd166",
font=("Arial",14,"bold")).pack(side="left", padx=(20,0))

tk.Button(header_frame, text="X", command=lambda:
self.close_detail_window(detail),
bg="#ff6b6b", fg="white", font=("Arial",10),
width=3, relief="flat").pack(side="right", padx=20)
```

```
container = tk.Frame(main_frame, bg=t["bg"])

container.pack(fill="both", expand=True, padx=20, pady=10)

summary_frame = tk.Frame(container, bg=t["frame"], padx=15, pady=15)

summary_frame.pack(fill="x", pady=(0,15))

target_harian = self.daily_targets.get(tanggal, "Tidak ada target")

total_jarak = self.daily_distances.get(tanggal, 0)

num_sessions = len(self.history[tanggal])

tk.Label(summary_frame, text=f' SUMMARY - {tanggal}',  
       bg=t["frame"],  
       fg=t["fg"], font=("Arial",11,"bold")).pack(anchor="w", pady=(0,8))

tk.Label(summary_frame, text=f'• Target Harian: {target_harian} km',  
       bg=t["frame"], fg=t["fg"], font=("Arial",10)).pack(anchor="w")

tk.Label(summary_frame, text=f'• Total Jarak: {total_jarak:.2f} km',  
       bg=t["frame"], fg="#4ecdc4", font=("Arial",10)).pack(anchor="w")

tk.Label(summary_frame, text=f'• Jumlah Sesi: {num_sessions} sesi',  
       bg=t["frame"], fg="#888", font=("Arial",9)).pack(anchor="w")

canvas_frame = tk.Frame(container, bg=t["bg"])
```

```
canvas_frame.pack(fill="both", expand=True)

canvas = tk.Canvas(canvas_frame, bg=t["bg"], highlightthickness=0,
height=300)

scrollbar = ttk.Scrollbar(canvas_frame, orient="vertical",
command=canvas.yview)

scrollable_content = tk.Frame(canvas, bg=t["bg"])

scrollable_content.bind(
"<Configure>",
lambda e: canvas.configure(scrollregion=canvas.bbox("all"))

)

canvas.create_window((0, 0), window=scrollable_content, anchor="nw",
width=550)

canvas.configure(yscrollcommand=scrollbar.set)

canvas.pack(side="left", fill="both", expand=True)

scrollbar.pack(side="right", fill="y")

tk.Label(scrollable_content, text="📝 DETAİL SESİ LARI", bg=t["bg"],
fg=t["fg"], font=("Arial",11,"bold")).pack(anchor="w", pady=(0,10))
```

```
for idx, item in enumerate(self.history[tanggal], 1):
    session_frame = tk.Frame(scrollable_content, bg=t["card"], padx=15,
y=12)
    session_frame.pack(fill="x", pady=4)

    header_sesi = tk.Frame(session_frame, bg=t["card"])
    header_sesi.pack(fill="x", pady=(0,8))

    tk.Label(header_sesi, text=f"Sesi #{idx} - {item['time']}",
bg=t["card"], fg=t["fg"], font=("Arial",10,"bold")).pack(side="left")

    detail_frame = tk.Frame(session_frame, bg=t["card"])
    detail_frame.pack()

    left_frame = tk.Frame(detail_frame, bg=t["card"])
    left_frame.grid(row=0, column=0, padx=(0,20))

    tk.Label(left_frame, text=f"Jarak: {item['jarak']} km",
bg=t["card"], fg="#4ecdc4", font=("Arial",9)).pack(anchor="w")

    tk.Label(left_frame, text=f"Waktu: {item['waktu']} menit",
bg=t["card"], fg="#4ecdc4", font=("Arial",9)).pack(anchor="w")
```

```
tk.Label(left_frame, text=f"Pace: {item['pace']:.2f} menit/km",
         bg=t["card"], fg="#4ecdc4", font=("Arial",9)).pack(anchor="w")

right_frame = tk.Frame(detail_frame, bg=t["card"])
right_frame.grid(row=0, column=1)

tk.Label(right_frame, text=f"Speed: {item['speed']:.1f} km/jam",
         bg=t["card"], fg="#ff6b6b", font=("Arial",9)).pack(anchor="w")
tk.Label(right_frame, text=f"Kalori: {item['kal']:.0f} kal",
         bg=t["card"], fg="#ff6b6b", font=("Arial",9)).pack(anchor="w")
tk.Label(right_frame, text=f"Total Harian: {item['total_jarak_harian']:.1f} km",
         bg=t["card"], fg="#888", font=("Arial",9)).pack(anchor="w")

def _on_mousewheel(event):
    canvas.yview_scroll(int(-1*(event.delta/120)), "units")

canvas.bind_all("<MouseWheel>", _on_mousewheel)

def delete_date_history():
```

```
if messagebox.askyesno("Konfirmasi", f"Hapus semua data untuk tanggal {tanggal}?" ):  
    if tanggal in self.history:  
        del self.history[tanggal]  
        if tanggal in self.daily_targets:  
            del self.daily_targets[tanggal]  
            if tanggal in self.daily_distances:  
                del self.daily_distances[tanggal]  
                self.save_data()  
                detail.destroy()  
                self.show_history()  
                messagebox.showinfo("Sukses", f'Data untuk {tanggal} telah dihapus!')
```

```
button_frame = tk.Frame(container, bg=t["bg"] )  
button_frame.pack(fill="x", pady=(15,0))  
  
tk.Button(button_frame, text="Hapus Data Tanggal Ini",  
command=delete_date_history,  
bg="#ff6b6b", fg="white", font=("Arial",10), padx=15).pack()
```

```
def close_detail_window(self, window):  
    """Menutup window detail"""  
    window.destroy()
```

```

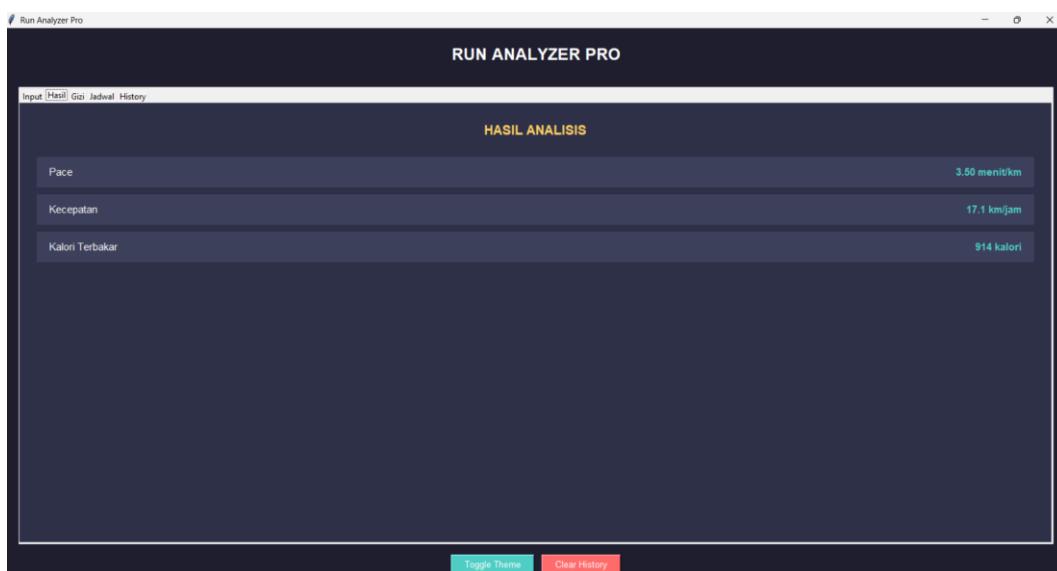
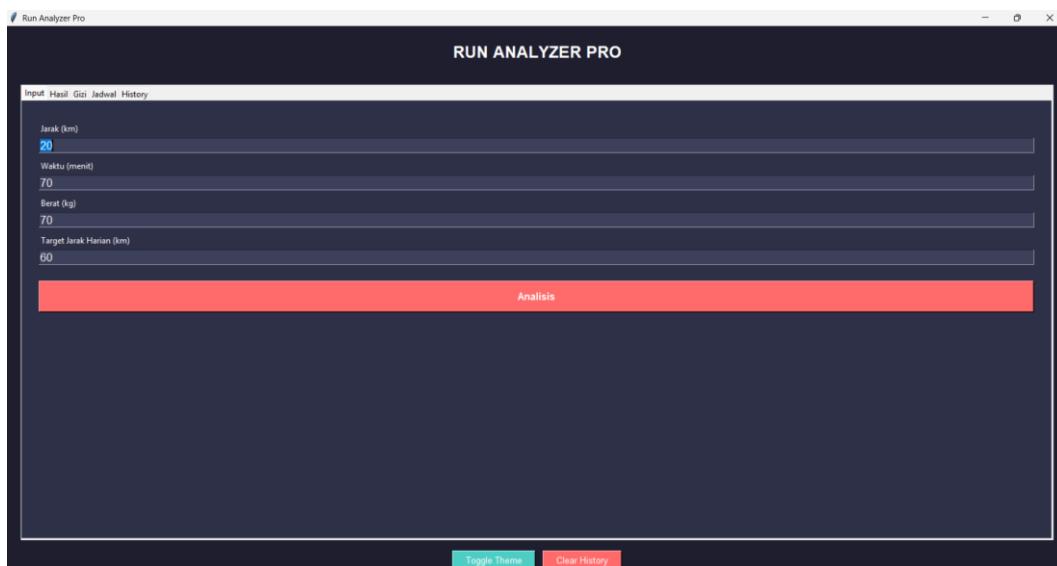
# Refresh history tab

self.show_history()

if __name__ == "__main__":
    app = RunningApp()
    app.mainloop()

```

Tampilan:



Run Analyzer Pro

RUN ANALYZER PRO

Input Hasil Gizi Jadwal History

PROGRES & NUTRISI

PROGRES TARGET LARI HARIAN

| | | |
|----------------|---|----------|
| Target Harian | : | 60.0 km |
| Jarak Hari Ini | : | 70.0 km |
| Sisa Jarak | : | 10.00 km |
| Persentase | : | 116.7% |

TARGET HARIAN TERCAPI!
Total lari hari ini: 70.0 km (Target: 60.0 km)
★ Anda telah melewati target harian sebesar 10.0 km!

Run Analyzer Pro

RUN ANALYZER PRO

Input Hasil Gizi Jadwal History

KALORI TERBAKAR

914 kalori

Input terbaru: 20.0 km pada 17:55

REKOMENDASI NUTRISI

| | | |
|------------------|-------------|--------------------------------|
| Dada Ayam (100g) | 31g protein | Protein tinggi, rendah lemak |
| Telur (2 butir) | 13g protein | Protein lengkap, mudah dicerna |
| Salmon (100g) | 25g protein | Protein + Omega-3 |
| Tahu (100g) | 8g protein | Protein nabati |

Toggle Theme Clear History

Run Analyzer Pro

RUN ANALYZER PRO

Input Hasil Gizi Jadwal History

| | | |
|-------------------|----------------|---------------------------------|
| 8g protein | Protein nabati | |
| Nasi Merah (100g) | 23g karbo | Karbohidrat kompleks |
| Oatmeal (50g) | 30g karbo | Serat tinggi, energi tahan lama |
| Ubi (100g) | 20g karbo | Vitamin A, karbo sehat |
| Pisang (1 buah) | 27g karbo | Kalium, energi cepat |

TIPS CEPAT

- ✓ Protein dalam 30 menit setelah lari
- ✓ Minum air 500ml setiap 30 menit lari
- ✓ Karbohidrat kompleks sebelum lari
- ✓ Hindari makanan berat 2 jam sebelum lari

Toggle Theme Clear History

