AI BASED DIABETES PREDICTION SYSTEM

PROGRAM

# Import necessary libraries

import pandas as pd

from sklearn.model\_selection import train\_test\_split

from sklearn.ensemble import RandomForestClassifier

from sklearn.metrics import accuracy\_score

# Load the dataset (you can replace this with your data)

data = pd.read\_csv("diabetes\_dataset.csv")

# Define features (X) and target variable (y)

X = data.drop("Outcome", axis=1)

y = data["Outcome"]

# Split the data into training and testing sets

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

# Create and train the machine learning model

model = RandomForestClassifier(n\_estimators=100, random\_state=42)

model.fit(X\_train, y\_train)

# Make predictions on the test data

y\_pred = model.predict(X\_test)

# Calculate the accuracy of the model

accuracy = accuracy\_score(y\_test, y\_pred)

print(f"Accuracy: {accuracy}")

# Now, you can use this model to make predictions for new data.

# For a real-world system, you would typically deploy the model and create a user interface for data input and prediction display.