

Project Task: Design Your Own Drone

Short Description (80–100 words)

Sentence 1: Introduce your drone.

Sentence 2: Explain its function and main features.

Sentence 3: Mention technologies used.

Sentence 4: Add benefits or improvements.

1. Purpose of the Drone

(What is your drone designed for? What problems does it solve?)

Useful phrases:

The main purpose of this drone is to...

It is designed to...

This drone helps to...

Example:

The main purpose of this drone is to inspect bridges and detect structural damage using thermal sensors and HD cameras.

2. Drone Type and Main Features

(Describe the type — quadcopter, fixed-wing, hybrid — and its basic specifications.)

Useful phrases:

The drone is a... type.

It can fly for... minutes.

It is equipped with...

Example:

The drone is a quadcopter type with four rotors and an automatic stabilization system. It can fly for 45 minutes and carry a 2 kg camera payload.

3. Structure and Components

(List or describe key parts and their functions.)

Useful phrases:

The frame is made of...

The motors provide...

The flight controller processes...

The battery supplies power to...

Example:

The frame is made of carbon fiber to reduce weight. Four brushless motors and propellers generate lift. The flight controller processes GPS and sensor data to maintain stability.

4. Technologies Used

(Mention computer-assisted design or intelligent systems.)

Useful phrases:

CAD software is used for designing the drone parts.

3D printing is applied for producing lightweight components.

AI-based navigation helps to...

Example:

Engineers use CAD software to create 3D models of the frame and motor mounts. The parts are produced with 3D printing for higher precision and lower cost.

5. Benefits and Possible Improvements

(Explain what advantages your drone has and what can be improved.)

Useful phrases:

The main advantages are...

One possible improvement could be...

In the future, the drone could...

Example:

The main advantages are easy maintenance and high stability. In the future, the drone could include solar panels to extend flight time.

6. Visual Element (optional)

(Attach or draw a simple diagram or 3D model of your drone.)

Label main parts: frame, motors, propellers, flight controller, battery, sensors, camera.

Indicate materials or technologies used.