Introduction: The Intel Power Gadget and similar tools can be used to measure CPU power consumption and GPU power consumption of the computer is a power consumption measurement application developed for commercial purposes. This application allows users to measure the specific power consumption of a single application running on their computer. This technical documentation provides an overview of the code base and explains the implementation details.

Architecture and Technologies Used: The Intel Power Gadget and similar tools can be used to measure CPU power consumption and GPU power consumption of the computer is developed using the Django framework, a Python-based web framework. The architecture follows the Model-View-Controller (MVC) pattern, where models define the data structure, views handle the logic, and templates render the frontend.

The following technologies and libraries were used in the project:

Django: A high-level Python web framework for rapid development and clean design.

Psutil: A cross-platform library for retrieving system information, including power consumption.

HTML/CSS: Used for structuring and styling the frontend.

JavaScript: Used for handling form submission and AJAX requests.

Code Structure: The code base consists of the following main components:

models.py: Defines the application's data models, but in this case, no models were required as there is no data persistence.

views.py: Contains the Django views that handle the HTTP requests and responses.

urls.py: Maps the URLs to their corresponding views.

templates/: Directory containing the HTML templates for rendering the frontend.

static/: Directory for storing static files such as CSS and JavaScript.

Frontend Development: The frontend development involves creating an HTML template (power_consumption.html) that contains a form for inputting the PID of the target application. JavaScript code is used to handle form submission and send an AJAX request to the backend. The power consumption information returned by the backend is then displayed on the webpage.

Backend Development: The backend development is done using Django. The views.py file contains the power- consumption view, which handles the power consumption measurement request. It retrieves the PID from the request, uses the psutil library to fetch the power consumption details of the specified application, converts the information to JSON format, and sends it as the response.

Conclusion: The Intel Power Gadget and similar tools can be used to measure CPU power consumption and GPU power consumption of the computer is a power consumption measurement application that allows users to measure the power consumption of a specific application on their computer. It has been developed using the Django framework and utilizes the psutil library to retrieve power consumption details. The frontend is built with HTML, CSS, and JavaScript to provide a user-friendly interface for input and display of power consumption information.