**Technical Background**

The conceptual literature is about giving the researchers a better understanding about the related topics on their desired topic to help them understand it.

According to an article by “Prof. Dr. Marek Babicz and Dr. Magdalena Szyndler-Nędza” Modern pig breeding and production requires knowledge of the basic factors that determine the productive value, breeding value, behavior, and health of this livestock species. To maximize the effects, it is necessary to use the latest achievements in different fields of science: animal science, biotechnology, genomics, etc. These components interpenetrate and complement each other, resulting in valuable breeding and fattening material. The major focus of pig farming and breeding is to produce pork of the quality desired by consumers. This necessitates the use of various measures, such as selection of native and commercial breeds, crossbreeding schemes, feeding, housing conditions, pork production, and processing technology. Each of these elements is at the same time treated as a separate research issue. Their understanding contributes to improving pig farming efficiency while identifying new relationships of potential scientific and practical significance.

Researching information about User Interface (UI) in order to build an app that captivates user attention, upon researching the researchers concluded that Designers focus on accessibility and efficiency to optimize these on-the-go interactions Mobile design has different limitations and requirements than computer interfaces. To design a mobile app user interface, designers use user interface design principles. These principles include methods/processes to design the front-end view of software applications that clients or users can easily interact with without any hazards. The technique that designers use to create user interfaces in software or electronic devices with a focus on aesthetics or style is known as user interface (UI) design. Designers strive to produce user-friendly and enjoyable interfaces. Graphical user interfaces and other types, such as voice-controlled interfaces, are referred to as "UI design".

**Android Studio**

Android Studio is the official integrated development environment ([IDE](https://www.techtarget.com/searchsoftwarequality/definition/integrated-development-environment)) for Android application development. It is based on [IntelliJ IDEA](https://www.theserverside.com/definition/IntellJ-IDEA), a [Java](https://www.theserverside.com/definition/Java) integrated development environment for software, and incorporates its code editing and developer tools. Android Studio uses an Apply Changes feature to push code and resource changes to a running application. A code editor assists the developer with writing code and offering code completion, refraction and analysis. Applications built in Android Studio are then compiled into the [APK format](https://www.techtarget.com/whatis/definition/APK-file-Android-Package-Kit-file-format) for submission to the Google Play Store.

The following are the system requirements for Android Studio on Windows.

* 64-bit Microsoft Windows 8/10/11
* x86\_64 CPU architecture; 2nd generation Intel Core or newer, or AMD CPU with support for a [Windows Hypervisor](https://developer.android.com/studio/run/emulator-acceleration#vm-windows)
* 8 GB RAM or more
* 8 GB of available disk space minimum (IDE + Android SDK + Android Emulator)
* 1280 x 800 minimum screen resolution

**Java**

Java is a widely-used programming language for coding web applications. It has been a popular choice among developers for over two decades, with millions of Java applications in use today. Java is a multi-platform, object-oriented, and network-centric language that can be used as a platform in itself.

**XML**

The researchers used XML (eXtensible Markup Language) for the separation of the appearance of an application from its code and enabling a clean designer-developer workflow. XML is used to implement UI-related data, and it’s a lightweight markup language that doesn’t make layout heavy. It only contains tags, while implementing they need to be just invoked.

**Common Breeds of Swine**

Listing and understanding the different breeds of swine to give base information about swine for the researchers.

**Large White**

Large white breeds are entirely white with medium, erect ears. It is the most common breed in the Philippines. As the name suggests, the Large White pig is large in size and of pure white coloration. It has white or pink skin, dished face, and erect ears of pink color. A mature boar has weights between 300 kg and 450 kg and a mature sow weigh between 250 kg and 350 kg.

**Landrace**

This breed is white, short-legged, and has medium to large drooping ears. Most of the nations in central and eastern Europe are home to the white, lop-eared Landrace pig. It raises huge litters and is renowned for its exceptional farrowing abilities. The breed lacks black hair and has white skin. They have long bodies and long snouts. The average mature sow weighs 204–272 kg, and the average mature boar weighs 272 to 408kg.

**Duroc**

An older domestic pig breed that was developed in the US is the duroc. It has golden yellow and reddish-brown coloring, a medium length, a muscular build, and ears that are partially drooped. By mating different red pig strains, the breed was created in New England in the early 1800s. The Jersey Red and the elder Duroc from New York were crossed to create the present breed. The Duroc pig is one of the friendliest, most affectionate, and approachable breeds you can discover.

**Ideal Food for Pigs**

The basic formulation of pig feed changes as the pigs grow to meet the needs of your growing pigs. You simply select the feed based on the pigs' weight. You've probably heard that pigs can eat almost anything, you can find people raising pigs on very different diets all over the world. What is the best thing to feed pigs to keep them happy and healthy according to a blog by kathy mccune on the website “[What’s The Best Thing To Feed Pigs? – Family Farm Livestock](https://familyfarmlivestock.com/whats-the-best-thing-to-feed-pigs/)” The best feed for pigs depends on the pig's age and weight, but most commonly**corn-based feeds** are used because they are high in digestible carbohydrates, low in fiber, and cost-effective the best feed for pigs depends on the pig's age and weight, but most commonly corn-based feeds are used because they are high in digestible carbohydrates, low in fiber, and cost-effective

**Vitamins for Pigs**

Pigs require a variety of vitamins and minerals in their diets. B-complex vitamins, including riboflavin, niacin, pantothenic acid, and vitamin B12, are added to swine diets, while folic acid, pyridoxine, choline, and biotin are included in sow diets due to their influence on reproductive performance. This information is from a study called “Kansas State University Applied Swine Nutrition” by Menegat, Mariana B., Robert D. Goodband, Joel M. DeRouchey, Mike D. Tokach, Jason C. Woodworth, and Steve S. Dritz. (2019).