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**Certificate**

**Project Name: Ambiente**

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**Abstract**

With the growth of the cosmetics industry, the choice of a good skin-care product has become even more difficult. Newer products in the market tend to have a different chemical composition and each brand likes to state that theirs is the best and more effective than the rest.

While this might be true in some cases, mostly the new products have a few extra chemicals which turn out to be toxic, and might even pose an imminent danger to the environment.

Our application provides a means to help people choose what is best for them and the environment at the same time. It is designed to gather information from various trusted sites and government released documents and rate the toxicity of the product as a whole based on the toxicity of each of its chemical ingredient.

The app will help create awareness about the rising concern about the environment and the effect of chemicals on humans and other living creatures.

1. **Introduction**

Statistically, the growth in cosmetic industries has increased a lot, with consumers spending a significant amount on cosmetics. The rise in affordably priced beauty products leads to increased competition among cosmetic companies .

This led to a surge in the number of newer cosmetic products and companies. There is a great range of choices for consumers from choosing among the old faithful brands or new brands. The rise of cosmetics in the market has increased the risk of choosing the products that can potentially have very harmful impacts on the consumer’s and the environment’s health.

When we deal with cosmetics affecting our health, we forget to consider how harmful it can be to the rest of the environment. Some harmful effects the cosmetic ingredients can have are:

* The toxic ingredients washed down the drain, usually end up in the oceans without being properly treated. This damages the eco-system and causes death or abnormalities to a large number of aquatic species.
* The toxins that end up in the soil from such contaminated water or any other way, can cause serious damages to animals and plants. The toxins can cause reproductive, genetic and various abnormal genetic changes, including cancer.

We cannot completely stop using cosmetic products but can maintain a balance with trade-offs to reduce the overall harmful effect it can have on the environment. This is what our project aims to achieve.

## **Project Description**

The project entitled ***“Ambiente”*** is a mobile application which helps consumers to choose the best cosmetic product for themselves and/or find alternatives to what they’re using already. The vast database formed by gathering data and reports from multiple websites and government released datasets is designed specifically to help consumers to make a good choice regarding their health and the adverse effect on the environment.

The app rates the products based on the toxicity of its chemical ingredients and provides an overall rating for each product. It also provides information about what are some of the concerns regarding each of the ingredient of the product. This helps consumers have a better knowledge of the ingredients and how they affect them.

The ratings of each chemical ingredient are based on a trade-off between its effect on the environment and the consequences of its usage on the human body. This ensures a good balance between the environmental impact and the health impact of the product.

**Our App is divided into 3 segments:**

* **Category Choice:** Users choose from a range of various categories of products that they wish to look up like Creams, Eye Liners and so on.
* **Product Choice:** Depending on what category a user has chosen, they will be provided with a list of products from which they can choose to look up for more detailed information on each ingredient.
* **Product Information:** This provides information about every ingredient in the product and their rating and concerns related to them.

1. **Proposed System**

# **Module Description:**

* **AppCompatActivity:**

This is a special library that allows working with the action bar features and

activity features.

* **Fragment Manager:**

This is needed to create and manage fragments.

* **Fragment Transaction:**

This is needed to perform any adding, removing or replacing of fragments.

* **Linear Layout Manager:**

This is used to get any features and function that can be performed on a

Linear Layout.

* **Relative Layout Manager:**

This is used to get any features and function that can be performed on a

Relative Layout.

* **Bundle:**

This is used to pass information as a bundle to different parts of the

program, from activity to fragments and so on.

* **Log:**

This is used to print any information in the logcat and mainly used for

debugging.

* **Recycler View:**

This is used instead of List View as this is much faster and less resource

hungry.

* **Animation Utils:**

This is to get the animation utilities to give transition and animation effects

for different parts of the project.

* **ArrayLists:**

This is used to store the collection of data retrieved from the Database.

* **Array:**

Used for its functionality to convert a simple array to an ArrayList.

* **Intent:**

To start new activities and control it.

* **LayoutInflater:**

It is used to inflate(fill) a particular layout with the required data.

* **View:**

To store the View Class object returned by the inflator.

* **ViewGroup:**

To hold the parent View.

* **Context:**

To store the context of the current activity

* **SQLiteDatabase:**

To get the features of SQLite.

* **SQLiteOpenHelper:**

It is a helper class for SQLite which allows to retrieve data from the Database

with ease.

* **Cursor:**

This is used to navigate through the database.

* **Bitmap:**

It is used to store a bitmap image.

* **BitmapFactory:**

It is used to convert byte array retrieved from the database into a bitmap

object.

* **SQLiteAssetHelper:**

This is used to access externally created database from the assets folder.

* **RatingBar:**

Used to store rating bar information and get access to the methods

necessary to make changes to the rating bar dynamically.

# **Hardware and Software Requirements:**

**Hardware requirements:**

**Developing Environment**

|  |  |
| --- | --- |
| * **RAM** | 16GB |
| * **Processor** | Intel i7 8th Gen |
| * **Memory Capacity** | Min 15GB |

**Client Environment**

|  |  |
| --- | --- |
| * **RAM** | 4GB or above |
| * **Processor** | Snapdragon 810, Samsung Exynos 5430 or higher |
| * **Memory Capacity** | 128MB |
| * **Screen Type** | Touch Screen |

**Software requirements:**

**Developing Environment**

|  |  |
| --- | --- |
| * **Operating System** | Windows 10, Mojave |
| * **Coding/Scripting Languages** | Java, Python, XML |
| * **Tools Required** | Android Studios, Anaconda, Adobe Illustrator |

**Client Environment**

|  |  |
| --- | --- |
| * **Android Version** | Android 5 or above |
| * **Operating System** | Any Android OS |

1. **Screenshots**

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1. **Conclusion**

This app can be very useful for consumers to choose the best product for themselves. This can also help the government to impose a better regulation on the cosmetic industries. The app works offline by downloading the database and doesn’t require any sign-up. So it can be used free of cost by anyone, anywhere and anytime. The App can further be extended to work alongside online markets for purchasing the product the consumer likes. The app also helps raise awareness about the damage the chemicals in cosmetics can inflict on the environment.

The proposed idea can be further extended to include other consumer goods, like packed foods, household cleaning products, etc.

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