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#### INTRODUCTION

The main objective of News App is to provide the users with easy access to the latest news from a variety of reliable sources for user-friendly and efficient manner. This app should aim to offer a clean and organized interface, with a focus on delivering news articles quickly and efficiently.

#### 1.1 Overview:

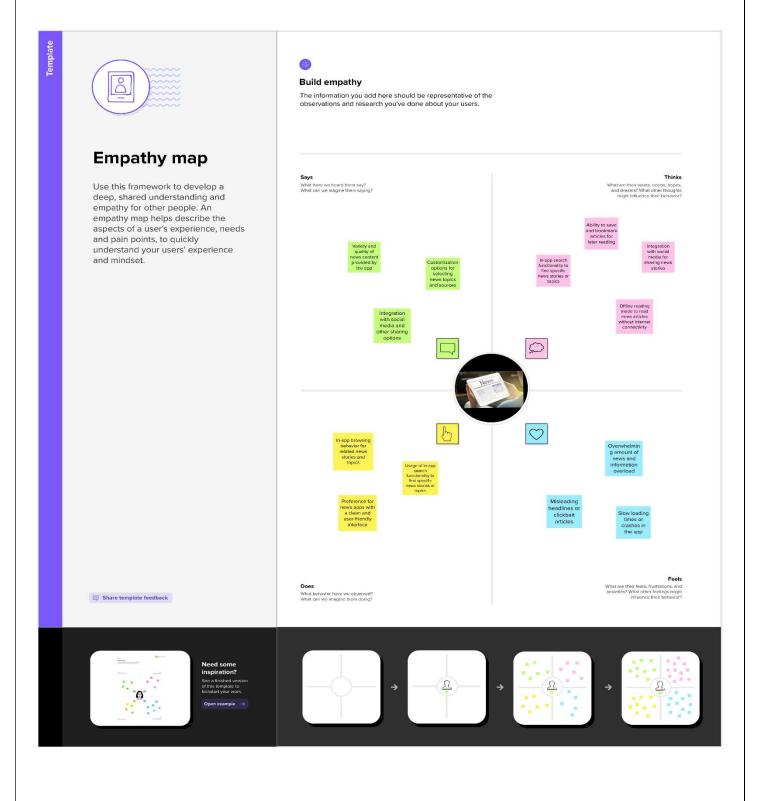
- ➤ Providing a personalized experience: The News app should allow users to customize their news feed based on their interests, location, or other preferences.
- ➤ Offering real-time updates: This app should be updated frequently to ensure that users have access to the latest news as it happens.
- Ensuring accuracy and reliability: It should only source news from credible and reliable sources to ensure that users receive accurate and trustworthy information.
- ➤ Enhancing engagement: This app should provide users with the ability to interact with news stories by commenting, sharing, or reacting to articles.

#### 1.2 Purpose:

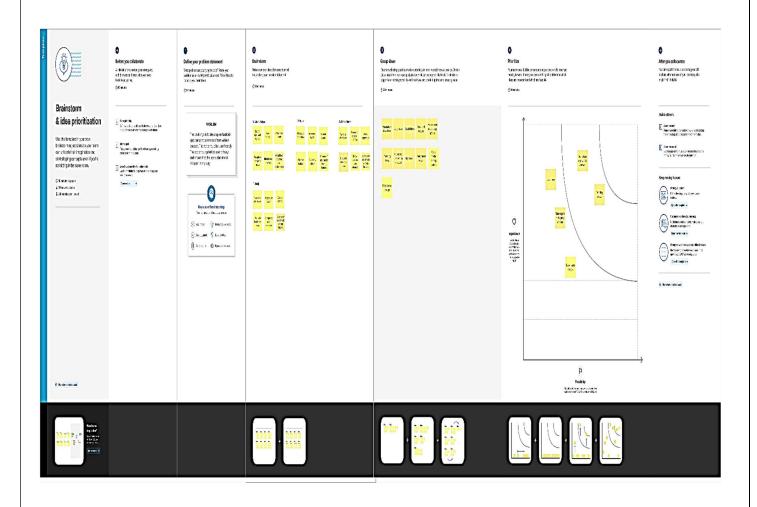
- ➤ Providing users with a convenient and efficient way to access news articles from different sources.
- ➤ Delivering news stories in real-time to ensure users stay up-to-date on current events.
- ➤ Providing a platform for users to engage with news stories, share articles with others, and provide feedback or comments.
- ➤ Offering a platform for publishers to distribute their content and reach a wider audience.

# PROBLEM DEFINITION & DESIGN THINKING

# 2.1 Empathy Map:

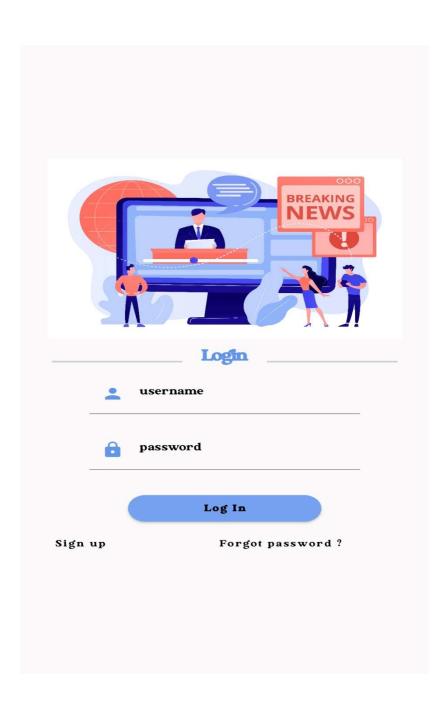


# 2.2 Ideation & Brainstorming Map:



# **RESULT**

# Sign in Page:



# Sign up page:

# Sign Up



- username
- apassword
- email

Register

Have an account? Log in

#### **Home Page:**

# **Latest NEWS**



Inside the international sting operation to catch North Korean crypto hackers - CNN

A team of South Korean spies and American private investigators quietly gathered at the South Korean intelligence service in January, just days after North Vonce fined three ballistic missiles into



US Government May Launch New Effort To Seize Private Property. Says JPMorgan CEO — Here's Why -The Daily Hodl

JPMorgan CEO Jamie Dimon says the US government may need to seize private property to fuel one of its most



Tesla employees shared private footage from customers' cars. lawsuit says - The Washington Post The shared images and videos included a naked man approaching a Tesla and memes of family pets. The lawsuit is seeking damages for vehicle owners and languages



Substack CEO pushes back at Elon. says Twitter situation is "very frustrating" - The Verge
Substack CEO Chris Best fires back at Elon Musk claiming the company violated Twitter's terms of service.



Top Dogecoin Whales Offloaded Over \$123.000.000 DOGE As the Memecoin

# **News Page:**

# Inside the international sting operation to catch North Korean crypto hackers - CNN

A team of South Korean spies and American private investigators quietly gathered at the South Korean intelligence service in January. just days after North Korea fired three ballistic missiles into the sea.



#### **ADVANTAGES & DISADVANTAGES**

### 1.1 Advantages:

- ➤ Convenience: A news app provides users with a quick and convenient way to access news articles from multiple sources in one place, without having to navigate through various websites or apps.
- ➤ Personalization: Users can customize their news feed by selecting topics or categories of interest, ensuring that they only receive news that is relevant to them.
- Real-time updates: A news app can deliver news stories in real-time, ensuring that users stay up-to-date on current events as they unfold.
- ➤ Privacy: Unauthorized person cannot access your app without enter correct username and password.

#### 1.2 Disadvantages:

- ➤ User engagement: A news app can provide users with features such as commenting, sharing, and saving articles, which can encourage engagement and interaction with the app.
- ➤ Technical issues: As with any app, technical issues such as bugs, crashes, or slow loading times can frustrate users and damage the app's reputation.
- Limited news sources: If the app only pulls news from a select few sources, users may not receive a diverse range of perspectives on news events. This could lead to a perception of bias or limited coverage.
- Limited functionality: If the app only provides basic features such as signing up and listing news articles, it may not be competitive with other news apps that offer more advanced features such as multimedia content, social sharing, or personalization.

#### **APPLICATIONS**

- ➤ General news: A news app can be used to deliver general news articles from a variety of sources, covering topics such as politics, world news, sports, and entertainment.
- Social news: A news app can incorporate social media features to allow users to share news articles with their social network or engage in discussions around specific news events.
- Education: A news app can be used in an educational setting to provide students with access to current events and news articles relevant to their coursework or research.
- ➤ Business: A news app can be used in a business setting to provide employees with access to news articles and updates related to their industry or company.
- Travel: A news app can provide users with access to news articles and updates related to their travel destination, including local news, events, and travel tips.
- ➤ Politics: A news app can be used in a political setting to provide users with access to news articles and updates related to politics, elections, and government policies.

#### **Conclusion**

We conclude that the News app would feature a sign-up and sign-in page, as well as a news page where articles are listed with current updates. Additionally, the app would allow users to view short notes on news articles when they select a particular news item. However, there are some potential limitations to this app, such as limited news sources, basic functionality, and lack of offline access. To improve the app, you plan to add the ability to save news articles, show brief news articles when a user selects a particular news item, improve the user interface, and show news articles based on categories. It can be applied in various areas where there is a need for access to up-to-date news and information, including general news, local news, niche news, social news, education, business, travel, and politics. The UI will be improved to make the app more visually appealing and user-friendly. The News app will not have offline access initially, but this will also be added in a future update.

#### **Future Scopes**

In future adding more sources to provide users with a wider range of news articles to choose from. To make the app more engaging for users and adding personalization features. Adding features that allow users to share news articles with their friends, or engage in discussions around specific news events. Adding audio and video clip features to the app for more user-friendly. To add more local news articles to provide users with up-to-date information on events and news in their local area and allow users to access news articles even when they are not connected to the internet.

#### **APPENDIX**

#### **Source Code:**

https://github.com/addrik-kalyan/News Headlines

#### Code:

1. LoginActivity.kt

package com.example.newsheadlines

import android.content.Context

import android.content.Intent

import android.os.Bundle

import androidx.activity.ComponentActivity

import androidx.activity.compose.setContent

import androidx.compose.foundation.Image

import androidx.compose.foundation.background

import androidx.compose.foundation.layout.\*

import androidx.compose.foundation.shape.RoundedCornerShape

import androidx.compose.material.\*

import androidx.compose.material.icons.Icons

import androidx.compose.material.icons.filled.Lock

import androidx.compose.material.icons.filled.Person

import androidx.compose.runtime.\*

import androidx.compose.ui.Alignment

import androidx.compose.ui.Modifier

import androidx.compose.ui.graphics.Color

import androidx.compose.ui.res.painterResource

```
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.input.PasswordVisualTransformation
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.core.content.ContextCompat
import androidx.core.content.ContextCompat.startActivity
import com.example.newsheadlines.ui.theme.NewsHeadlinesTheme
class LoginActivity : ComponentActivity() {
  private lateinit var databaseHelper: UserDatabaseHelper
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    databaseHelper = UserDatabaseHelper(this)
    setContent {
       LoginScreen(this, databaseHelper)
    }
@Composable
fun LoginScreen(context: Context, databaseHelper: UserDatabaseHelper) {
  var username by remember { mutableStateOf("") }
  var password by remember { mutableStateOf("") }
  var error by remember { mutableStateOf("") }
  Column(
    Modifier
       .fillMaxHeight()
       .fillMaxWidth()
```

```
.padding(28.dp),
  horizontalAlignment = Alignment.CenterHorizontally,
  verticalArrangement = Arrangement.Center)
{
  Image(
    painter = painterResource(id = R.drawable.news),
    contentDescription = "")
  Spacer(modifier = Modifier.height(10.dp))
  Row {
    Divider(color = Color.LightGray, thickness = 2.dp, modifier = Modifier
       .width(155.dp)
       .padding(top = 20.dp, end = 20.dp))
    Text(text = "Login",
       color = Color(0xFF6495ED),
       fontWeight = FontWeight.Bold,
       fontSize = 24.sp,style = MaterialTheme.typography.h1)
    Divider(color = Color.LightGray, thickness = 2.dp, modifier = Modifier
       .width(155.dp)
       .padding(top = 20.dp, start = 20.dp))
  }
  Spacer(modifier = Modifier.height(10.dp))
  TextField(
    value = username,
```

```
onValueChange = { username = it },
  leadingIcon = {
    Icon(
       imageVector = Icons.Default.Person,
       contentDescription = "personIcon",
       tint = Color(0xFF6495ED)
    )
  },
  placeholder = {
    Text(
      text = "username",
       color = Color.Black
    )
  },
  colors = TextFieldDefaults.textFieldColors(
    backgroundColor = Color.Transparent
  )
)
Spacer(modifier = Modifier.height(20.dp))
TextField(
  value = password,
  onValueChange = { password = it },
  leadingIcon = {
    Icon(
       imageVector = Icons.Default.Lock,
       contentDescription = "lockIcon",
```

```
tint = Color(0xFF6495ED)
         )
       },
       placeholder = { Text(text = "password", color = Color.Black) },
       visualTransformation = PasswordVisualTransformation(),
       colors = TextFieldDefaults.textFieldColors(backgroundColor =
Color.Transparent)
    )
     Spacer(modifier = Modifier.height(12.dp))
     if (error.isNotEmpty()) {
       Text(
         text = error,
         color = MaterialTheme.colors.error,
         modifier = Modifier.padding(vertical = 16.dp)
       )
     }
    Button(
       onClick = {
         if (username.isNotEmpty() && password.isNotEmpty()) {
            val user = databaseHelper.getUserByUsername(username)
            if (user != null && user.password == password) {
              error = "Successfully log in"
              context.startActivity(
                 Intent(
                   context,
                   MainPage::class.java
```

```
)
                                                                                   //onLoginSuccess()
                                                                       } else {
                                                                                   error = "Invalid username or password"
                                                        } else {
                                                                     error = "Please fill all fields"
                                                         }
                                         },
                                         shape = RoundedCornerShape(20.dp),
                                          {\color{blue} colors} = Button Defaults. button Colors (background Color = {\color{blue} colors}) + {\color{blue} colors} = {\color{blue} colors} + {\color{blue} colors}
Color(0xFF77a2ef)),
                                         modifier = Modifier.width(200.dp)
                                          .padding(top = 16.dp)
                          ) {
                                         Text(text = "Log In", fontWeight = FontWeight.Bold)
                            }
                            Row(modifier = Modifier.fillMaxWidth()) {
                                         TextButton(onClick = {
                                                       context.startActivity(
                                                                      Intent(
                                                                                   context,
                                                                                   RegistrationActivity::class.java
                                                                      ))})
                                           { Text(text = "Sign up",
                                                       color = Color.Black
                                         )}
```

## 2. RegistrationActivity.kt

package com.example.newsheadlines

```
import android.content.Context
import android.content.Intent
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.Image
import androidx.compose.foundation.background
import androidx.compose.foundation.layout.*
import androidx.compose.foundation.shape.RoundedCornerShape
import androidx.compose.material.*
import androidx.compose.material.icons.Icons
import androidx.compose.material.icons.filled.Email
import androidx.compose.material.icons.filled.Lock
import androidx.compose.material.icons.filled.Person
import androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.input.PasswordVisualTransformation
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.core.content.ContextCompat
```

```
import com.example.newsheadlines.ui.theme.NewsHeadlinesTheme
```

```
class RegistrationActivity : ComponentActivity() {
  private lateinit var databaseHelper: UserDatabaseHelper
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    databaseHelper = UserDatabaseHelper(this)
    setContent {
           RegistrationScreen(this,databaseHelper)
         }
@Composable
fun RegistrationScreen(context: Context, databaseHelper:
UserDatabaseHelper) {
  var username by remember { mutableStateOf("") }
  var password by remember { mutableStateOf("") }
  var email by remember { mutableStateOf("") }
  var error by remember { mutableStateOf("") }
  Column(
    Modifier
       .background(Color.White)
       .fillMaxHeight()
       .fillMaxWidth(),
```

```
horizontalAlignment = Alignment.CenterHorizontally,
  verticalArrangement = Arrangement.Center)
{
  Row {
    Text(
      text = "Sign Up",
      color = Color(0xFF6495ED),
      fontWeight = FontWeight.Bold,
      fontSize = 24.sp, style = MaterialTheme.typography.h1
    )
    Divider(
       color = Color.LightGray, thickness = 2.dp, modifier = Modifier
         .width(250.dp)
         .padding(top = 20.dp, start = 10.dp, end = 70.dp)
    )
  }
  Image(
    painter = painterResource(id = R.drawable.sign up),
    contentDescription = "",
    modifier = Modifier.height(270.dp)
  )
  TextField(
    value = username,
    onValueChange = { username = it },
    leadingIcon = {
       Icon(
```

```
imageVector = Icons.Default.Person,
       contentDescription = "personIcon",
       tint = Color(0xFF6495ED)
    )
  },
  placeholder = {
    Text(
       text = "username",
       color = Color.Black
    )
  },
  colors = TextFieldDefaults.textFieldColors(
    backgroundColor = Color.Transparent
  )
)
Spacer(modifier = Modifier.height(8.dp))
TextField(
  value = password,
  onValueChange = { password = it },
  leadingIcon = {
    Icon(
       imageVector = Icons.Default.Lock,
       contentDescription = "lockIcon",
       tint = Color(0xFF6495ED)
    )
  },
  placeholder = { Text(text = "password", color = Color.Black) },
```

```
visualTransformation = PasswordVisualTransformation(),
       colors = TextFieldDefaults.textFieldColors(backgroundColor =
Color.Transparent)
     )
     Spacer(modifier = Modifier.height(16.dp))
     TextField(
       value = email,
       onValueChange = { email = it },
       leadingIcon = {
         Icon(
            imageVector = Icons.Default.Email,
            contentDescription = "emailIcon",
            tint = Color(0xFF6495ED)
         )
       },
       placeholder = { Text(text = "email", color = Color.Black) },
       colors = TextFieldDefaults.textFieldColors(backgroundColor =
Color.Transparent)
     )
     Spacer(modifier = Modifier.height(8.dp))
     if (error.isNotEmpty()) {
       Text(
         text = error,
         color = MaterialTheme.colors.error,
```

```
modifier = Modifier.padding(vertical = 16.dp)
       )
    Button(
       onClick = {
         if (username.isNotEmpty() && password.isNotEmpty() &&
email.isNotEmpty()) {
            val user = User(
              id = null.
              firstName = username,
              lastName = null,
              email = email,
              password = password
            )
            databaseHelper.insertUser(user)
            error = "User registered successfully"
            // Start LoginActivity using the current context
            context.startActivity(
              Intent(
                 context,
                 LoginActivity::class.java
            )
          } else {
            error = "Please fill all fields"
         }
       },
       shape = RoundedCornerShape(20.dp),
```

```
{\color{blue} colors} = Button Defaults. button Colors (background Color = {\color{blue} colors}) + {\color{blue} colors} = {\color{blue} colors} + {\color{blue} colors}
Color(0xFF77a2ef)),
                                     modifier = Modifier.width(200.dp)
                                                   .padding(top = 16.dp)
                        ) {
                                     Text(text = "Register", fontWeight = FontWeight.Bold)
                         }
                         Row(
                                     modifier = Modifier.padding(30.dp),
                                      verticalAlignment = Alignment.CenterVertically,
                                    horizontalArrangement = Arrangement.Center
                        ) {
                                      Text(text = "Have an account?")
                                      TextButton(onClick = {
                                                  context.startActivity(
                                                               Intent(
                                                                            context,
                                                                            LoginActivity::class.java
                                                               )
                                                   )
                                     }) {
                                                 Text(text = "Log in",
                                                               fontWeight = FontWeight.Bold,
                                                               style = MaterialTheme.typography.subtitle1,
                                                               color = Color(0xFF4285F4)
                                                  )}
```

```
}
}
private fun startLoginActivity(context: Context) {
  val intent = Intent(context, LoginActivity::class.java)
  ContextCompat.startActivity(context, intent, null)
}
```

## 3. MainPage.kt

package com.example.newsheadlines

```
import android.content.Context
import android.content.Intent
import android.content.Intent.FLAG ACTIVITY NEW TASK
import android.os.Bundle
import android.util.Log
import android.widget.TextView
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.activity.viewModels
import androidx.compose.foundation.Image
import androidx.compose.foundation.background
import androidx.compose.foundation.clickable
import androidx.compose.foundation.layout.*
import androidx.compose.foundation.lazy.LazyColumn
import androidx.compose.foundation.lazy.itemsIndexed
import androidx.compose.foundation.selection.selectable
import androidx.compose.foundation.shape.RoundedCornerShape
import androidx.compose.material.Card
import androidx.compose.material.MaterialTheme
import androidx.compose.material.Surface
import androidx.compose.material.Text
import androidx.compose.runtime.*
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.text.font.FontWeight
```

```
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.compose.ui.viewinterop.AndroidView
import androidx.core.text.HtmlCompat
import coil.compose.rememberImagePainter
import coil.size.Scale
import coil.transform.CircleCropTransformation
import com.example.example.Articles
import com.example.newsheadlines.ui.theme.NewsHeadlinesTheme
class MainPage : ComponentActivity() {
  val mainViewModel by viewModels<MainViewModel>()
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContent {
       NewsHeadlinesTheme {
         // A surface container using the 'background' color from the theme
         Surface(color = MaterialTheme.colors.background) {
           Column() {
              Text(text = "Latest NEWS", fontSize = 32.sp, modifier =
Modifier.fillMaxWidth(), textAlign = TextAlign.Center)
              MovieList(applicationContext, movieList =
mainViewModel.movieListResponse)
              mainViewModel.getMovieList()
           }
         }
```

```
}
    }
@Composable
fun MovieList(context: Context, movieList: List<Articles>) {
  var selectedIndex by remember { mutableStateOf(-1) }
  LazyColumn {
    itemsIndexed(items = movieList) {
         index, item ->
       MovieItem(context,movie = item, index, selectedIndex) { i ->
         selectedIndex = i
       }
    }
}
@Composable
fun MovieItem(context: Context) {
  val movie = Articles(
    "Coco",
    " articl"
  MovieItem(context, movie = movie, 0, 0) { i ->
```

```
Log.i("wertytest123abc", "MovieItem: "
         +i
  }
@Composable
fun MovieItem(context: Context, movie: Articles, index: Int, selectedIndex:
Int,
        onClick: (Int) -> Unit)
{
  val backgroundColor = if (index == selectedIndex)
MaterialTheme.colors.primary else MaterialTheme.colors.background
  Card(
     modifier = Modifier
       .padding(8.dp, 4.dp)
       .fillMaxSize()
       .selectable(true, true, null,
         onClick = {
            Log.i("test123abc", "MovieItem: $index/n$selectedIndex")
         })
       .clickable { onClick(index) }
       .height(180.dp), shape = RoundedCornerShape(8.dp), elevation = 4.dp
  ) {
     Surface(color = Color.White) {
       Row(
         Modifier
            .padding(4.dp)
```

```
.fillMaxSize()
)
  Image(
    painter = rememberImagePainter(
       data = movie.urlToImage,
       builder = {
         scale(Scale.FILL)
         placeholder(R.drawable.placeholder)
         transformations(CircleCropTransformation())
       }
    ),
    contentDescription = movie.description,
    modifier = Modifier
       .fillMaxHeight()
       .weight(0.3f)
  )
  Column(
    verticalArrangement = Arrangement.Center,
    modifier = Modifier
       .padding(4.dp)
       .fillMaxHeight()
       .weight(0.8f)
       .background(Color.Gray)
       .padding(20.dp)
       .selectable(true, true, null,
         onClick = {
```

```
Log.i("test123abc", "MovieItem:
$index/n${movie.description}")
                   context.startActivity(
                      Intent(context, DisplayNews::class.java)
                        .setFlags(Intent.FLAG_ACTIVITY_NEW_TASK)
                        .putExtra("desk", movie.description.toString())
                        .putExtra("urlToImage", movie.urlToImage)
                        .putExtra("title", movie.title)
                   )
                 })
         ) {
            Text(
              text = movie.title.toString(),
              style = MaterialTheme.typography.subtitle1,
              fontWeight = FontWeight.Bold
            )
            HtmlText(html = movie.description.toString())
         }
       }
     }
  @Composable
  fun HtmlText(html: String, modifier: Modifier = Modifier) {
    AndroidView(
       modifier = modifier
          .fillMaxSize()
          .size(33.dp),
       factory = { context -> TextView(context) },
```

```
update = { it.text = HtmlCompat.fromHtml(html,
HtmlCompat.FROM_HTML_MODE_COMPACT) }
```

#### 4. DisplayNews.kt

package com.example.newsheadlines

import android.content.Intent import android.os.Bundle import android.util.Log import android.widget.TextView import androidx.activity.ComponentActivity import androidx.activity.compose.setContent import androidx.compose.foundation.Image import androidx.compose.foundation.background import androidx.compose.foundation.layout.Arrangement import androidx.compose.foundation.layout.Column import androidx.compose.foundation.layout.fillMaxSize import androidx.compose.foundation.layout.padding import androidx.compose.material.MaterialTheme import androidx.compose.material.Surface import androidx.compose.material.Text import androidx.compose.runtime.Composable import androidx.compose.ui.Alignment import androidx.compose.ui.Modifier import androidx.compose.ui.graphics.Color import androidx.compose.ui.tooling.preview.Preview import androidx.compose.ui.unit.dp import androidx.compose.ui.unit.sp import androidx.compose.ui.viewinterop.AndroidView import androidx.core.text.HtmlCompat import coil.compose.rememberImagePainter

import com.example.newsheadlines.ui.theme.NewsHeadlinesTheme

```
class DisplayNews : ComponentActivity() {
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContent {
       NewsHeadlinesTheme {
         // A surface container using the 'background' color from the theme
         Surface(
            modifier = Modifier.fillMaxSize(),
            color = MaterialTheme.colors.background
         ) {
            var desk = getIntent().getStringExtra("desk")
            var title = getIntent().getStringExtra("title")
            var uriImage = getIntent().getStringExtra("urlToImage")
           Log.i("test123abc", "MovieItem: $desk")
            Column(Modifier.background(Color.Gray).padding(20.dp),
horizontalAlignment = Alignment.CenterHorizontally, verticalArrangement =
Arrangement.Center) {
              Text(text = ""+title, fontSize = 32.sp)
              HtmlText(html = desk.toString())
              Image(
                 painter = rememberImagePainter(uriImage),
                 contentDescription = "My content description",
            }
           // Greeting(desk.toString())
         }
```

```
}
    }
@Composable
fun Greeting(name: String) {
  // Text(text = "Hello $name!")
}
@Preview(showBackground = true)
@Composable
fun DefaultPreview() {
  NewsHeadlinesTheme {
    // Greeting("Android")
  }
@Composable
fun HtmlText(html: String, modifier: Modifier = Modifier) {
  AndroidView(
    modifier = modifier,
    factory = { context -> TextView(context) },
    update = { it.text = HtmlCompat.fromHtml(html,
HtmlCompat.FROM_HTML_MODE_COMPACT) }
  )
```