Maintainability in Mobile

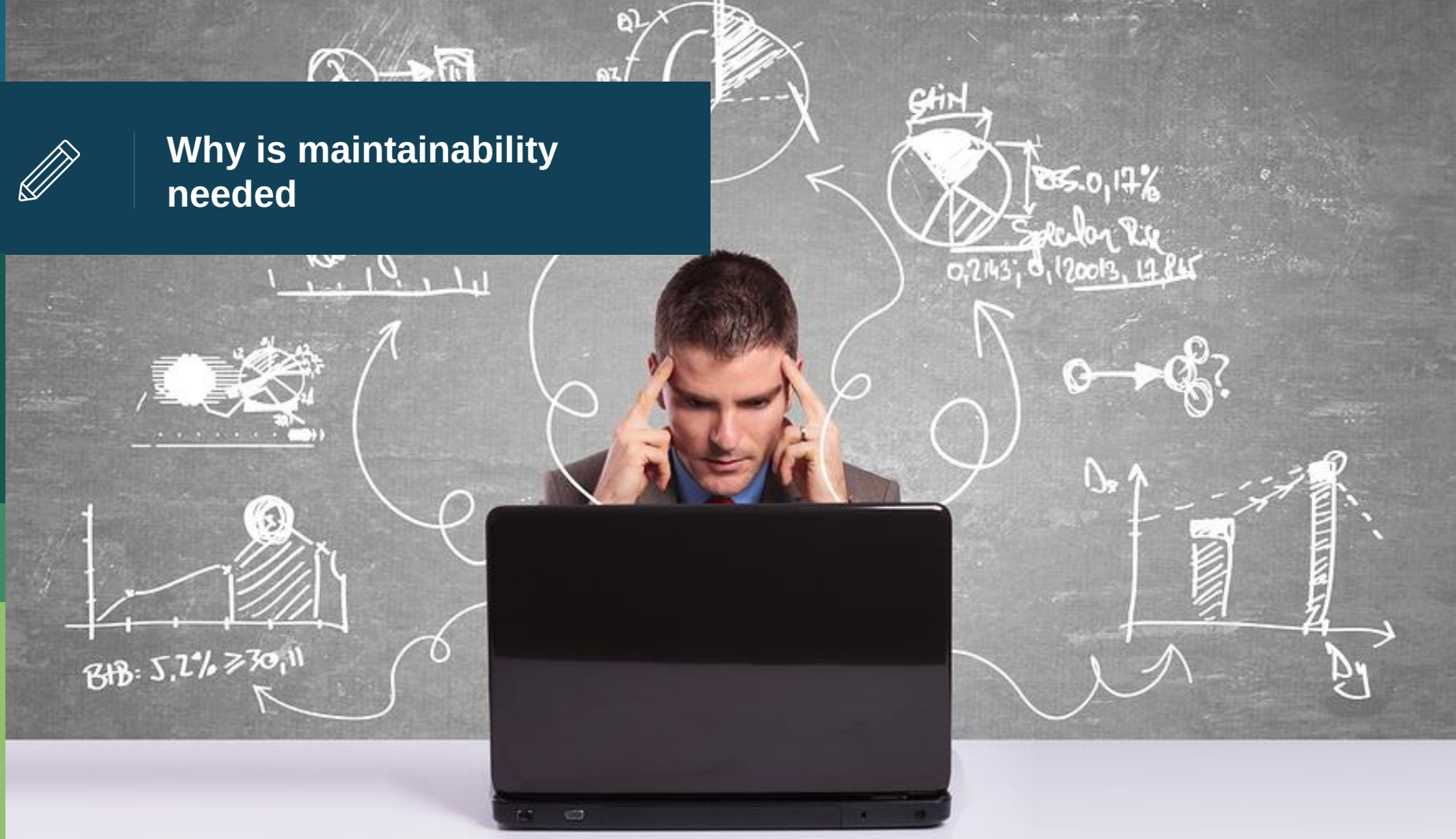
Agenda

- What is a maintainable product
- Why is maintainability needed
- What you can start doing to make your app maintainable
- The cost of neglecting maintainability

What is a maintainable product

- Find a bug
- Fix that bug
- Add new features
- Add/change configurations
- Write unit tests
- Understand the code

Why is maintainability needed



What you can start doing to make your app maintainable

S.O.L.I.D.

Principles

```java
public class DemoActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_demo);

        ImageView imageView = (ImageView) findViewById(R.id.imageView1);

        Picasso.with(this)
                .load(IMAGE_URL)
                .placeholder(R.mipmap.ic_launcher)
                .error(R.mipmap.ic_launcher)
                .into(imageView);

        imageView.setOnClickListener((view) -> {
                getSupportFragmentManager().beginTransaction()
                        .replace(R.id.main_container, new DemoFragment())
                        .addToBackStack(null)
                        .commit();
        });
    }
```

```java
public class DemoFragment extends Fragment {

    @Override
    public void onViewCreated(View view, @Nullable Bundle savedInstanceState) {
        super.onViewCreated(view, savedInstanceState);
        ImageView anotherImageView = (ImageView) view.findViewById(R.id.imageView2);

        Picasso.with(getActivity())
                .load(ANOTHER_IMAGE_URL)
                .placeholder(R.mipmap.ic_launcher)
                .error(R.mipmap.ic_launcher)
                .into(anotherImageView);

        anotherImageView.setOnClickListener((view) -> {
                getActivity().getSupportFragmentManager().beginTransaction()
                        .replace(R.id.main_container, new AnotherDemoFragment())
                        .addToBackStack(null)
                        .commit();
        });
    }
```

```java
public class DemoActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_demo);

        ImageView imageView = (ImageView) findViewById(R.id.imageView1);

        Picasso.with(this)
                .load(IMAGE_URL)
                .placeholder(R.mipmap.ic_launcher)
                .error(R.mipmap.ic_launcher)
                .into(imageView);

        imageView.setOnClickListener((view) -> {
                getSupportFragmentManager().beginTransaction()
                        .replace(R.id.main_container, new DemoFragment())
                        .addToBackStack(null)
                        .commit();
        });
    }
```

```java
public class DemoFragment extends Fragment {

    @Override
    public void onViewCreated(View view, @Nullable Bundle savedInstanceState) {
        super.onViewCreated(view, savedInstanceState);
        ImageView anotherImageView = (ImageView) view.findViewById(R.id.imageView2);

        Picasso.with(getActivity())
                .load(ANOTHER_IMAGE_URL)
                .placeholder(R.mipmap.ic_launcher)
                .error(R.mipmap.ic_launcher)
                .into(anotherImageView);

        anotherImageView.setOnClickListener((view) -> {
                getActivity().getSupportFragmentManager().beginTransaction()
                        .replace(R.id.main_container, new AnotherDemoFragment())
                        .addToBackStack(null)
                        .commit();
        });
    }
```

```java
public class ImageLoader {

    private Picasso picasso;

    public ImageLoader(Context context){
        picasso = Picasso.with(context);
    }

    public void load(String url, ImageView imageview) {
        picasso.load(url)
                .placeholder(R.mipmap.ic_launcher)
                .error(R.mipmap.ic_launcher)
                .into(imageview);
    }
}
```

What you can start doing to make your app maintainable

git

Atlassian JIRA

```
git commit -m '[CW-101] Adding User profile view'
```

```
git commit -m 'Resolve code review comments'
git commit -m 'Resolve code review comments'
git commit -m 'Resolve code review comments'
git commit -m 'Resolve code review comments'
```

```
git rebase -i develop
```

What you can start doing to make your app maintainable

checkstyle

pmd
DON'T SHOOT THE MESSENGER

UNIVERSITY OF MARYLAND 18 56

FindBugs™
because it's easy

The cost of neglecting maintainability

THANKS!

Any questions?

You can find me at nadia.sevciuc@gmail.com

LinkedIn Nadejda Pascal