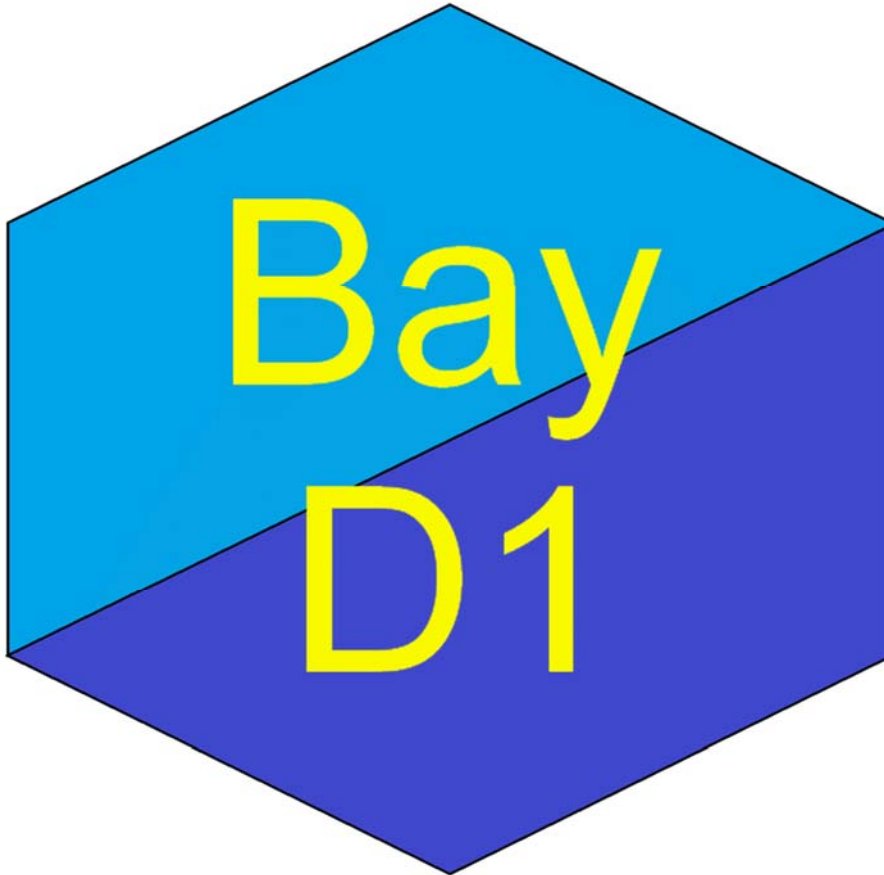## App Icons

First create a big high resolution (at least 1 MegaPixel) picture as master Icon. My Version:


Then on Github there is a tool, which automatically creates with this picture all other resolutions:
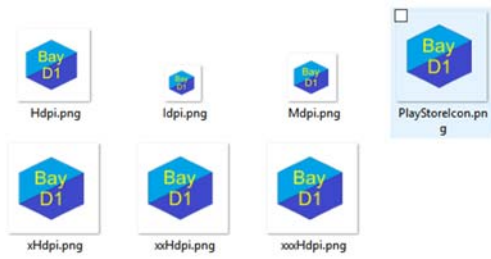
https://github.com/techierathore/ReSizer

(Attention: this Github version is not optimal, but I have optimized the code and you can find this Auto Resizer as ResizerBay on my pages in file ResizerBay.zip.)

With this tool I have produced the following pictures:
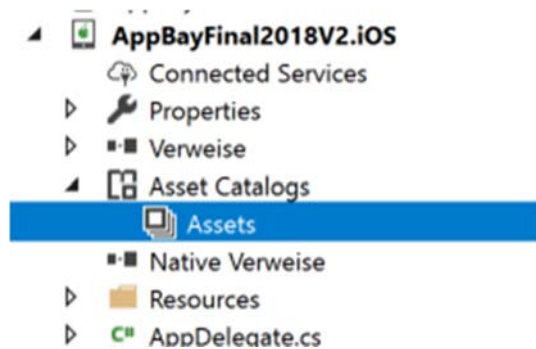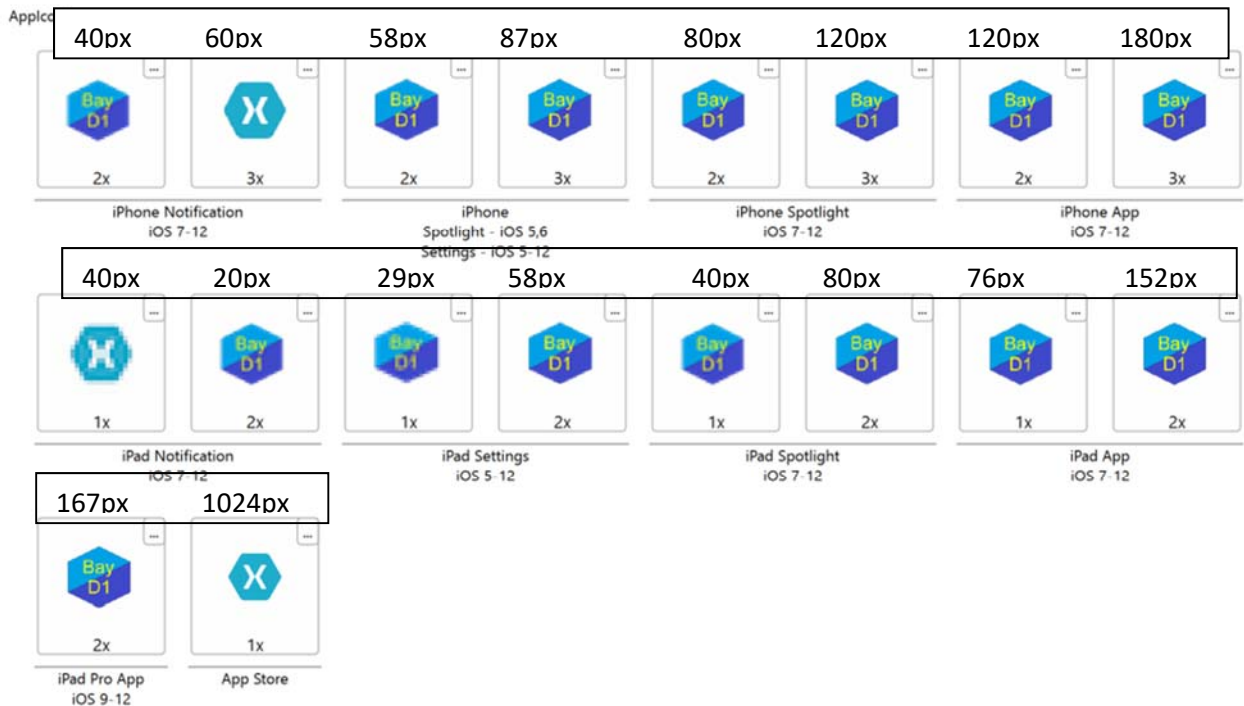
IOS- Images:
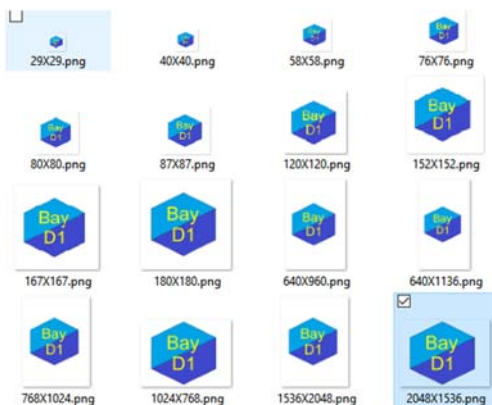
Android Images:

Und UWP- Images:

Then you have to fill these pictures manually at the right porsizions in the three platform projects.

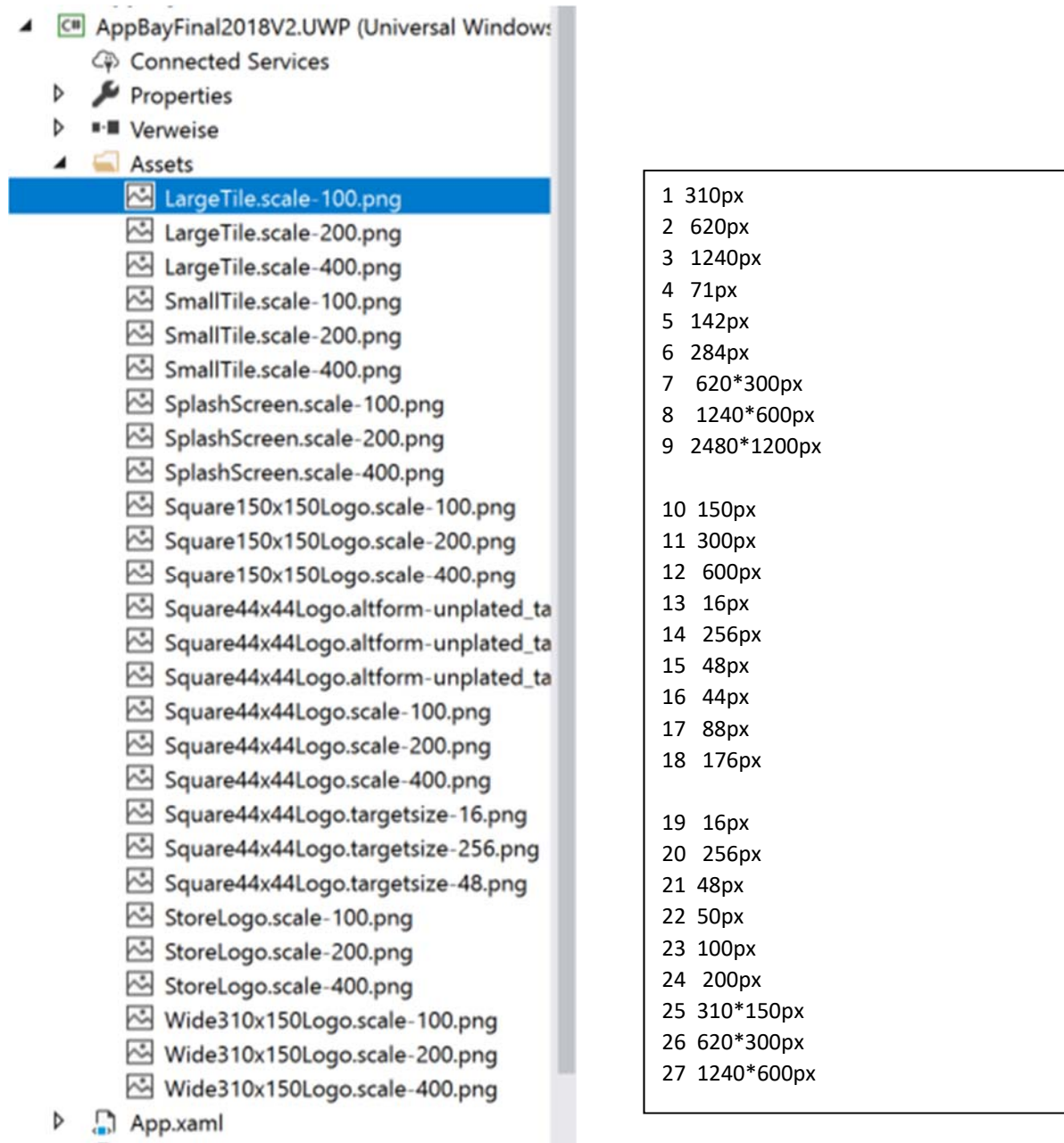IOS: In Solution -Explorer doubleclick on Assets:

Then an editor is opened and the icons can be changed by click on the top right buttons on each icon with the points:. See the text over the Icons with my added information about the sizes in pixel, e.g.40 px means an Icon with 40 * 40 pixel

40px	60px		58px	87px		80px	120px		120px	180px
2x	3x		2x	3x		2x	3x		2x	3x
iPhone Notification iOS 7-12			iPhone Spotlight - iOS 5,6 Settings - iOS 5-12			iPhone Spotlight iOS 7-12			iPhone App iOS 7-12	

40px	20px		29px	58px		40px	80px		76px	152px
1x	2x		1x	2x		1x	2x		1x	2x
iPad Notification iOS 7-12			iPad Settings iOS 5-12			iPad Spotlight iOS 7-12			iPad App iOS 7-12	

167px	1024px
2x	1x
iPad Pro App iOS 9-12	App Store

My Resizer- Version produced all pictures the original Github version leaves three pictures.

In UWP you can find in Assets 27 pictures with individual names, which has to be exchanged by your picture. In my Resizer version the names automatically are fitting.

▲   C#   AppBayFinal2018V2.UWP (Universal Windows
     ☁ Connected Services
   ▷   🔧 Properties
   ▷   ■·■ Verweise
   ▲   🗁 Assets
      LargeTile.scale-100.png
      LargeTile.scale-200.png
      LargeTile.scale-400.png
      SmallTile.scale-100.png
      SmallTile.scale-200.png
      SmallTile.scale-400.png
      SplashScreen.scale-100.png
      SplashScreen.scale-200.png
      SplashScreen.scale-400.png
      Square150x150Logo.scale-100.png
      Square150x150Logo.scale-200.png
      Square150x150Logo.scale-400.png
      Square44x44Logo.altform-unplated_ta
      Square44x44Logo.altform-unplated_ta
      Square44x44Logo.altform-unplated_ta
      Square44x44Logo.scale-100.png
      Square44x44Logo.scale-200.png
      Square44x44Logo.scale-400.png
      Square44x44Logo.targetsize-16.png
      Square44x44Logo.targetsize-256.png
      Square44x44Logo.targetsize-48.png
      StoreLogo.scale-100.png
      StoreLogo.scale-200.png
      StoreLogo.scale-400.png
      Wide310x150Logo.scale-100.png
      Wide310x150Logo.scale-200.png
      Wide310x150Logo.scale-400.png
   ▷   🗋 App.xaml

#	Size
1	310px
2	620px
3	1240px
4	71px
5	142px
6	284px
7	620*300px
8	1240*600px
9	2480*1200px
10	150px
11	300px
12	600px
13	16px
14	256px
15	48px
16	44px
17	88px
18	176px
19	16px
20	256px
21	48px
22	50px
23	100px
24	200px
25	310*150px
26	620*300px
27	1240*600px

To demonstrate, which Icon is used where I have changed the original UWP-xamarin- Icons with numbered icons.

In the starting list of Win10 see number 21:

Zuletzt hinzugefügt

X   testV2.UWP

21   AppBayFinal2018V2.UWP
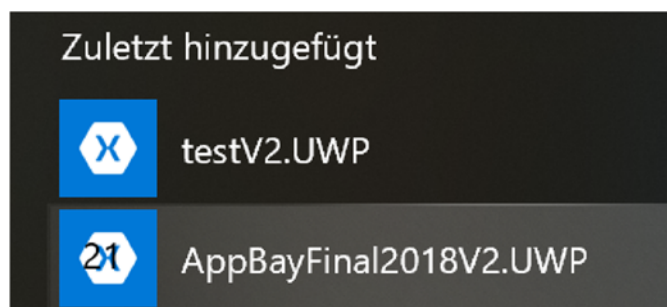
As „Medium sized" -large tile 11,   small tile 5
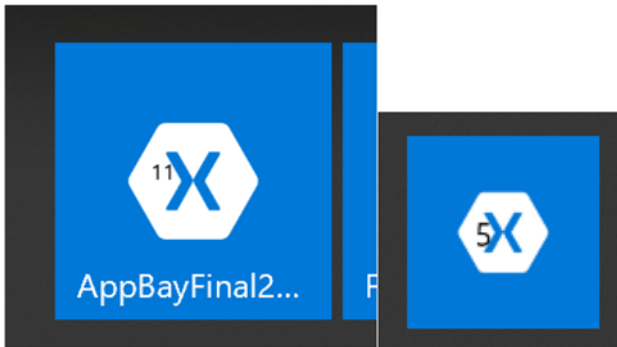
wide 26 and   large tile the nb 2
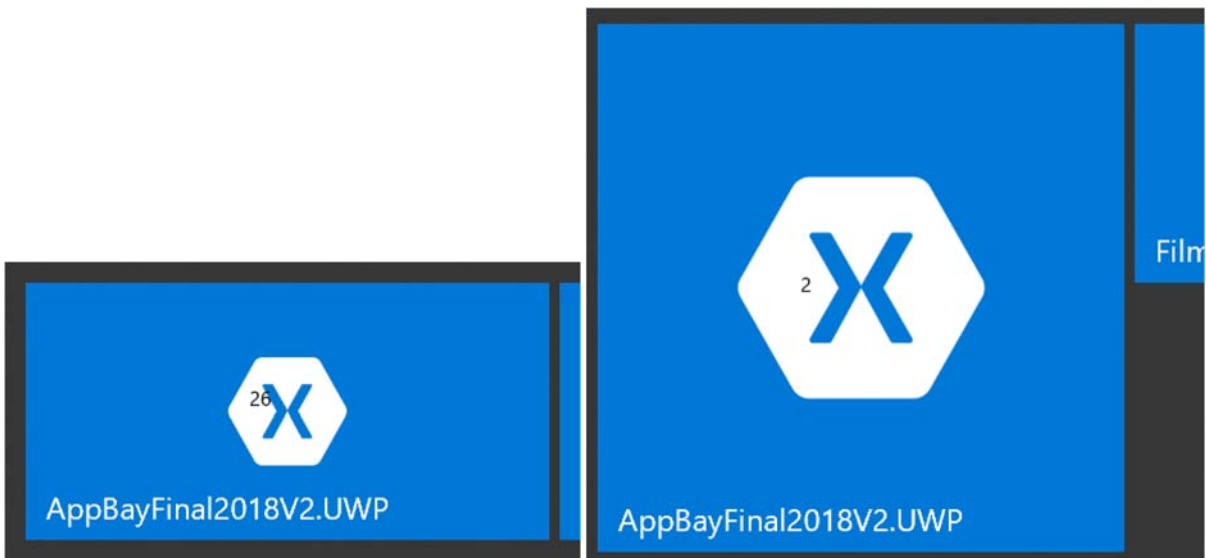
Start Window the 8:   in the taskbar 15 and link on desktop 17
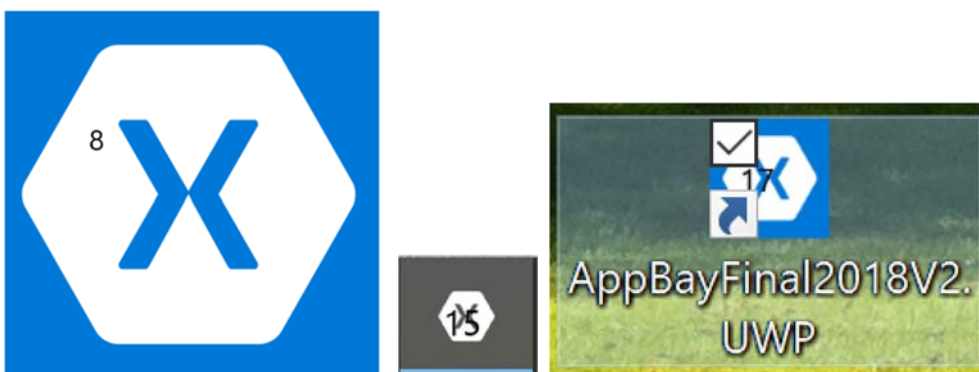
Same procedure in Android, in resources you can find 10 Icons, which I have numbered in the same way:

▲ 📱 AppBayFinal2018V2.Android
   ☁ Connected Services
 ▷ 🔧 Properties
 ▷ ▪▫▪ Verweise
 ▷ 📁 Assets
▲ 📂 Resources
    📁 drawable
    📁 drawable-hdpi
    📁 drawable-xhdpi
    📁 drawable-xxhdpi
    📁 drawable-xxxhdpi
 ▷ 📁 layout
▲ 📂 mipmap-anydpi-v26
    📄 icon.xml
    📄 icon_round.xml
▲ 📂 mipmap-hdpi
    🖼 icon.png
    🖼 launcher_foreground.png
▲ 📂 mipmap-mdpi
    🖼 icon.png
    🖼 launcher_foreground.png
▲ 📂 mipmap-xhdpi
    🖼 icon.png
    🖼 launcher_foreground.png
▲ 📂 mipmap-xxhdpi
    🖼 icon.png
    🖼 launcher_foreground.png
▲ 📂 mipmap-xxxhdpi
    🖼 icon.png
    🖼 launcher_foreground.png
    🖼 xxxHdpi.png

9	72px
10	162px
7	48px
8	108px
5	96px
6	216px
3	144px
4	324px
1	192px
2	432px

Diese findet man dann wieder:
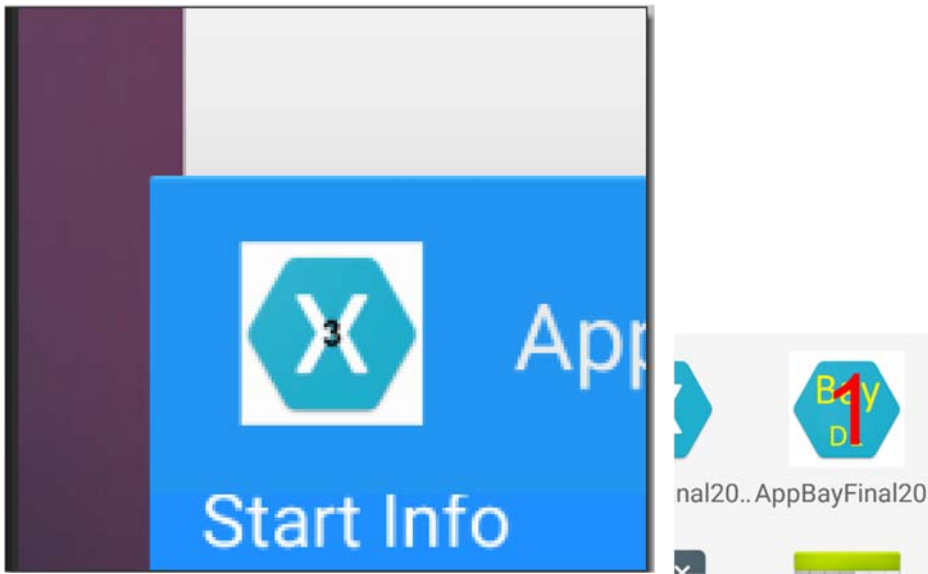
Marshmellow Taskmanager   App on Desktop

Bilder 4 (Taskmanager) und 2 (Desktop) in Android 8 und 9

With Android version 8 and 9 the icon is placed on a white circle. Im Emulator:

     Icon von Xamarin:
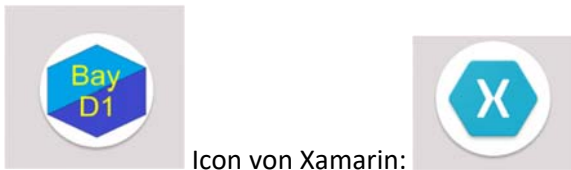
Bei Samsung S4 (Lollipop):
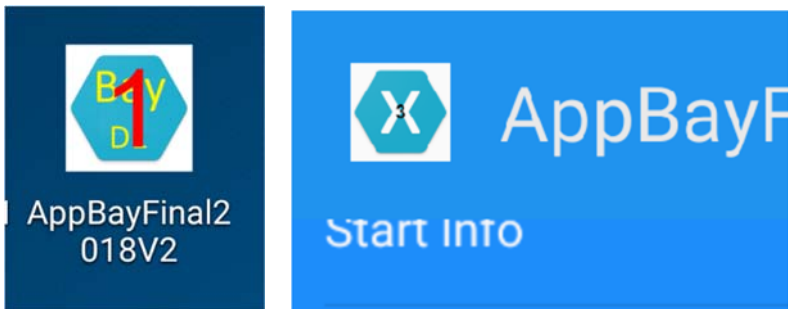
Desktop Nr 1   TaskManager Nr. 3

With Nougat 7.1 - Emulator:
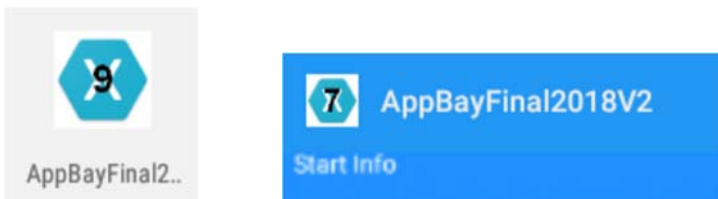
Desktop   Taskmanager

Some links to adaptive Icons starting with Android 8

https://forums.xamarin.com/discussion/146458/adaptive-icons-not-working-for-android-in-xamarin-forms-app

https://stackoverflow.com/questions/47864285/xamarin-oreo-adaptive-icons

https://developer.android.com/studio/write/image-asset-studio#access

My resizer version (ResizerBay.zip) creates in Android and UWP the correct names and folders. So you have only to copy your created files and folders manually into your projects.

Additionally you can define a transparent color, if your original picture has no one. If your original picture has already a transparent color it will be transferred to all icons.

Here a screen shot oft he ResizerBay:
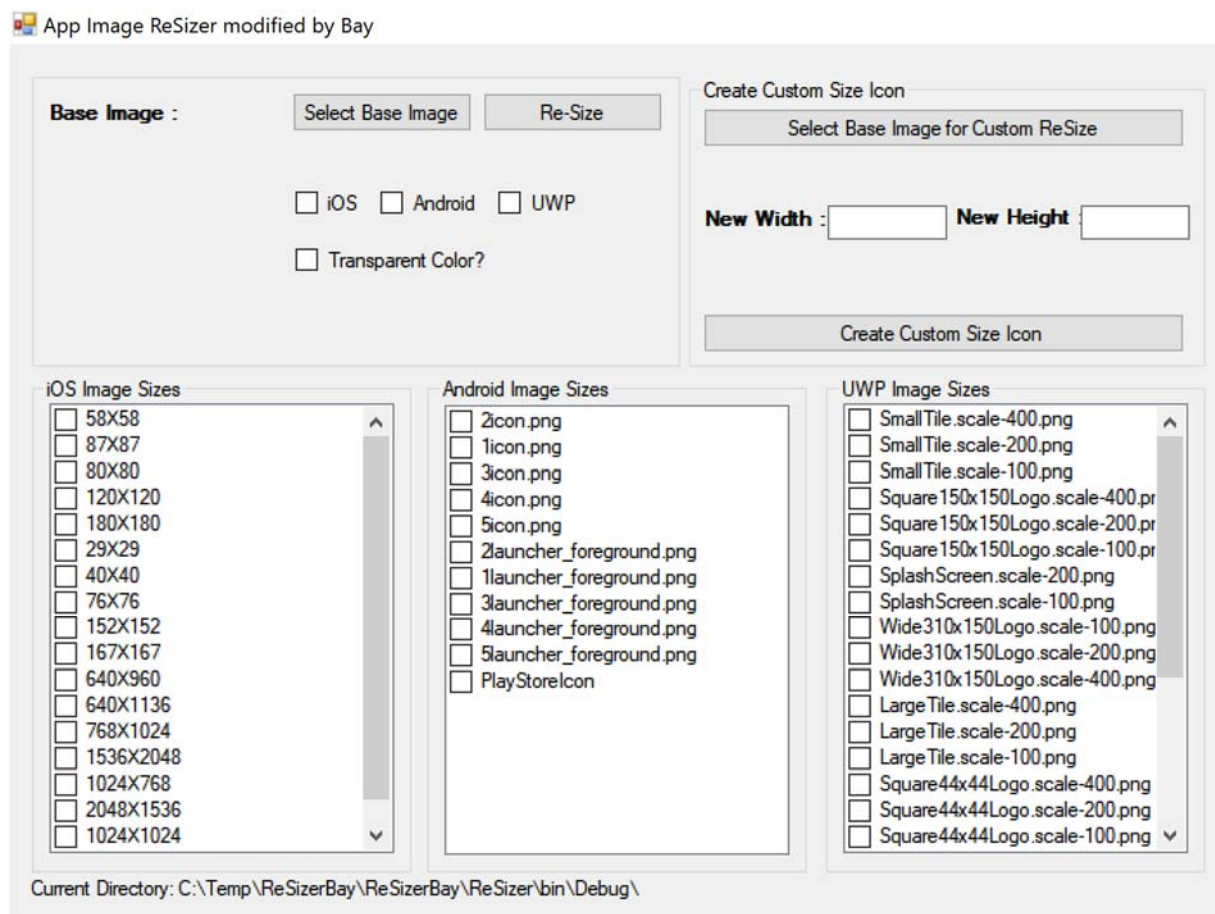
So with button „Select Base Image" define the master picture. Then select the platforms and transparent color and start with Re-Size- Button. In Feb. 2019 the „Create Custom Size Icon"- section is not needed, but perhaps in future the new operating systems need new sizes.

The resulting pictures of my version:

Android:

☑ 📁 mipmap-hdpi
   📁 mipmap-mdpi
   📁 mipmap-xhdpi
   📁 mipmap-xxhdpi
   📁 mipmap-xxxhdpi
   🖼 PlayStoreIcon.png

UWP:

Name	Date	Type	Size
LargeTile.scale-100.png	26.01.2019 08:02	PNG-Datei	310 x 310
LargeTile.scale-200.png	26.01.2019 08:02	PNG-Datei	620 x 620
LargeTile.scale-400.png	26.01.2019 08:02	PNG-Datei	1240 x 1240
SmallTile.scale-100.png	26.01.2019 08:02	PNG-Datei	71 x 71
SmallTile.scale-200.png	26.01.2019 08:02	PNG-Datei	142 x 142
SmallTile.scale-400.png	26.01.2019 08:02	PNG-Datei	284 x 284
SplashScreen.scale-100.png	26.01.2019 08:02	PNG-Datei	620 x 300
SplashScreen.scale-200.png	26.01.2019 08:02	PNG-Datei	1240 x 600
SplashScreen.scale-400.png	26.01.2019 08:02	PNG-Datei	2480 x 1200
Square44x44Logo.altform-unplated_targetsize-16.png	26.01.2019 08:02	PNG-Datei	16 x 16
Square44x44Logo.altform-unplated_targetsize-48.png	26.01.2019 08:02	PNG-Datei	48 x 48
Square44x44Logo.altform-unplated_targetsize-256.png	26.01.2019 08:02	PNG-Datei	256 x 256
Square44x44Logo.scale-100.png	26.01.2019 08:02	PNG-Datei	44 x 44
Square44x44Logo.scale-200.png	26.01.2019 08:02	PNG-Datei	88 x 88
Square44x44Logo.scale-400.png	26.01.2019 08:02	PNG-Datei	176 x 176
Square44x44Logo.targetsize-16.png	26.01.2019 08:02	PNG-Datei	16 x 16
Square44x44Logo.targetsize-48.png	26.01.2019 08:02	PNG-Datei	48 x 48
Square44x44Logo.targetsize-256.png	26.01.2019 08:02	PNG-Datei	256 x 256
Square150x150Logo.scale-100.png	26.01.2019 08:02	PNG-Datei	150 x 150
Square150x150Logo.scale-200.png	26.01.2019 08:02	PNG-Datei	300 x 300
Square150x150Logo.scale-400.png	26.01.2019 08:02	PNG-Datei	600 x 600
StoreLogo.scale-100.png	26.01.2019 08:02	PNG-Datei	50 x 50
StoreLogo.scale-200.png	26.01.2019 08:02	PNG-Datei	100 x 100
StoreLogo.scale-400.png	26.01.2019 08:02	PNG-Datei	200 x 200
Wide310x150Logo.scale-100.png	26.01.2019 08:02	PNG-Datei	310 x 150
Wide310x150Logo.scale-200.png	26.01.2019 08:02	PNG-Datei	620 x 300
Wide310x150Logo.scale-400.png	26.01.2019 08:02	PNG-Datei	1240 x 600

And iOS:

29X29.png	26.01.2019 08:02	PNG-Datei	29 x 29
40X40.png	26.01.2019 08:02	PNG-Datei	40 x 40
58X58.png	26.01.2019 08:02	PNG-Datei	58 x 58
60X60.png	26.01.2019 08:02	PNG-Datei	60 x 60
76X76.png	26.01.2019 08:02	PNG-Datei	76 x 76
80X80.png	26.01.2019 08:02	PNG-Datei	80 x 80
87X87.png	26.01.2019 08:02	PNG-Datei	87 x 87
120X120.png	26.01.2019 08:02	PNG-Datei	120 x 120
152X152.png	26.01.2019 08:02	PNG-Datei	152 x 152
167X167.png	26.01.2019 08:02	PNG-Datei	167 x 167
180X180.png	26.01.2019 08:02	PNG-Datei	180 x 180
640X960.png	26.01.2019 08:02	PNG-Datei	640 x 960
640X1136.png	26.01.2019 08:02	PNG-Datei	640 x 1136
768X1024.png	26.01.2019 08:02	PNG-Datei	768 x 1024
1024X768.png	26.01.2019 08:02	PNG-Datei	1024 x 768
1024X1024.png	26.01.2019 08:02	PNG-Datei	1024 x 1024
1536X2048.png	26.01.2019 08:02	PNG-Datei	1536 x 2048
2048X1536.png	26.01.2019 08:02	PNG-Datei	2048 x 1536

At this time I have not found a solution with the background of the icons in Android 8 and higher. I only get the white circle background. I guess I have to install the original Android Studio, which should have a tool for this purpose.

Some good other design pages:

https://material.io/design/introduction/#

Design page of Android site: https://developer.android.com/training/multiscreen/screendensities

https://developer.android.com/studio/write/image-asset-studio

https://developer.android.com/studio/

Bayerlein

6.2.2019