1. When developing a game, it is often the case that you add a variety of assets that you might use but you finally use only some of them. If you then package up the whole game it contains many unused assets that make the game difficult to upload and download. Discuss how to use the unity Asset- >Export Package to create a package that contains only the assets used in the game. Discuss also how to test that the package is complete and how to add missing items if it is not

1) Open said project that contains the assets you wish to export

2) Choose assets-> export package to show the exporting package dialog box

3) Select the assets you wish to export by checking the relevant boxes

4) ensure that include dependencies is checked to auto include all assets that your selected assets depend upon

5) click export to choose where to export said assets to

pro tip: if you select a given scene and export a package with all dependencies, everything that appears in said scene will be exported

if you need to add more assets:

1) select said asset(s) both new and already exported ones

2) export as described above

found answers : https://docs.unity3d.com/2017.1/Documentation/Manual/HOWTO-exportpackage.html

2. Briefly discuss the difference between local and global lighting and discuss why games use local lighting rather than global lighting

Using local illumination light sources only affect objects that said light directly illuminates, whereas global illumination light sources interact with multiple sources like ray-tracing does.

Local illumination is usually used as it requires much less computing power and time to render

3. What are the components of local lighting and how many constants are needed to define it?

ks = the ratio of reflection of the specular term of incoming light, constant

kd = the ratio of reflection of the diffuse term of incoming light, constant

ka = the ratio of reflection of the ambient term present in all points in the scene rendered, constant

alpha = is a *shininess* constant for this material, constant

lights = set of all light sources

Lm = the direction vector from the point on the surface toward each light source

N = the normal at this point on the surface

Rm = is the direction that a perfectly reflected ray of light would take from this point on the surface

V = the direction pointing towards the viewer

where:

4. Local lighting requires a vector that depends on the surface. What is that vector and how is determined for textures?

Lm or L sub(m)

It is determined by the smoothness or roughness of the texture of a given object.

5. What is z-buffer and how is it used to determine if a point in an object should be displayed?

z-buffer is also known as depth buffer

z-buffer compares surface depths and decides where objects are in relation to each other depth-wise