

Problem::

3. Function that generates indices for geometry to be rendered using triangle strips.

Answer::

To make a function that generates sphere indices you need to make a function named gensphereindices that takes in the arguments of unsigned int np and unsigned int numofM. Then you create a local std::vector of type glm::vec4 .then you create 3 local unsigned ints start,bottomleft, and bottomright .declare a for loop with the condition of int r=0;r<numofM;r++;then start -r *np; then create a nested for loop with the condition int p=0;p<np;p++then assign bottomleft the value of start +np.then assign bottomright the value of bottomleft +np.then push back sphere indices bottomleft and bottomright.and return sphere indices.

```
std::vector<unsigned int> RenderingGeometryApp::genSphereIndices(unsigned int np, unsigned int numofM)
{
    std::vector<unsigned int> Sphereindices;
    unsigned int start;
    unsigned int bottom_left;
    unsigned int bottom_right;
    for (int r = 0; r < numofM; r++)
    {
        start = r * np;
        for (int p = 0; p < np; p++)
        {
            bottom_left = start + p;
            bottom_right = bottom_left + np;
            Sphereindices.push_back(bottom_left);
            Sphereindices.push_back(bottom_right);
        }
        Sphereindices.push_back(0xFFFF);
    }
    return Sphereindices;
}
```