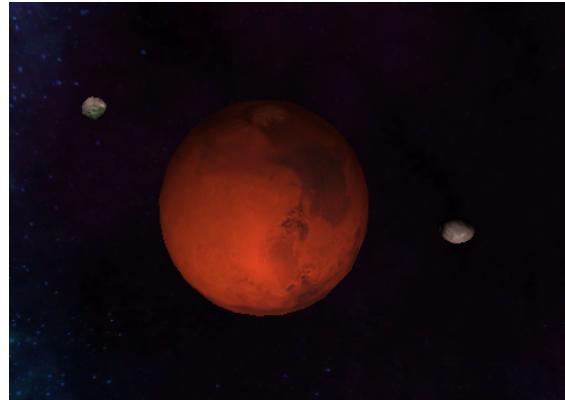


## CT3536 Unity3D Lab 2

### Sample Solution (code)



All code is written in the singleton GameManager class. Alternatively, we could have written code in separate scripts attached to specific game objects, containing code specific to their own behaviour. **Discussion: what code implications would that have?**

```
public class GameManager : MonoBehaviour {

    // Inspector settings (populated by dragging from the hierarchy)
    public GameObject camera, mars;
    public GameObject phobos, deimos;

    // Use this for initialization
    void Start () {
        camera.transform.position = new Vector3 (0f, 0f, -200f);
        camera.transform.LookAt(mars.transform);
        mars.GetComponent<Rigidbody>().AddTorque (new Vector3 (0f, 20f, 0f));
    }

    // Update is called once per frame
    void Update () {
        phobos.transform.RotateAround (Vector3.zero, Vector3.up, 3f * Time.deltaTime);
        deimos.transform.RotateAround (Vector3.zero, Vector3.up, 2f * Time.deltaTime);

        // NB we are using the camera's own coordinate system (rather than the global coordinate system) to specify the axis of rotation

        if (Input.GetKey(KeyCode.LeftArrow))
            camera.transform.RotateAround(Vector3.zero, camera.transform.up, 50f * Time.deltaTime);
        else if (Input.GetKey(KeyCode.RightArrow))
            camera.transform.RotateAround(Vector3.zero, camera.transform.up, -50f * Time.deltaTime);
        if (Input.GetKey(KeyCode.UpArrow))
            camera.transform.RotateAround(Vector3.zero, camera.transform.right, 50f * Time.deltaTime);
        else if (Input.GetKey(KeyCode.DownArrow))
            camera.transform.RotateAround(Vector3.zero, camera.transform.right, -50f * Time.deltaTime);
    }
}
```