Right and left ventricles pump blood into the lungs or rest of the body respectively.
Atria are separated from the ventricles by atrio-ventricular valves.

Histology of the heart:
- Endocardium: single layer of squamous epithelial cells on a thin layer of loose connective tissue (elastic, collagen and smooth muscle).
- Subendocardial layer: connective tissue layer (contains veins, nerves and branches of impulse conducting system) that connects endocardium to myocardium.
- Myocardium: thickest tunic, contains layers of cardiac muscle cells; thicker in the ventricles vs. the atria (thickest on left ventricle).
- Epicardium: External covering of the heart, thin layer of connective tissue covered by simple squamous epithelium (mesothelium).
- Subepicardial layer: loose connective tissue (contains veins, nerves, adipocytes).
- Pericardium: serous membrane in which the heart lies; the endocardium is the visceral layer, and outer layer is the parietal layer.
  - In between is the pericardial cavity, containing lubricant fluid facilitating the heart’s movements.
- Valve core of dense fibrous connective tissue (collagen and elastic) lined by endothelium.
  - Base of valves attached to strong fibrous rings that form part of the fibrous skeleton.

The heart tissue has specialised system to generate rhythmical stimulus for contraction, that spreads to the entire myocardium.

Consists of two nodes in the right atrium:
- Sino-atrial (SA) node
  - Small mass of modified myocardium; fusiform, smaller and fewer myofibrils.
- Atrio-ventricular (AV) node
  - Cells similar to SA but have branching cytoplasmic projections.

Atrioventricular bundle conducts the action potential along the AV septum and into right and left bundle branches to the Perkinje fibres.
Lymphatic vascular system

- In addition to blood vasculature the body has a system which gathers interstitial fluid and is a major distributor of lymphocytes, antibodies and other immune components.
- This system is made up of lymph and lymph vessels.
- Lymph
  - Excess interstitial fluid collected from tissue spaces and returned to the blood.
  - Does not contain red blood cells (although lymphocytes may be present) and is rich in proteins.
- Lymphatic vessels (lymphatics)
  - Lymph fluid is carried in the lymph vessels.
  - Lymph capillaries are closed ended vessels consisting of a single layer of very thin endothelial cells on an incomplete basal lamina.
  - The opening between cells allow for drainage of interstitial fluid, and the folds in the cells prevent backflow.
  - These openings are held open by anchoring filaments that bind the vessels to the surrounding connective tissue.