Budding:
The different kinds of budding are classified according to the manner in which the bark of the stock is prepared to receive the bud. The most important kinds are T-budding and Patch-budding.

T-Budding consists of making a cut in the bark of the stock in the form of a T and inserting the bud under the bark.

Patch-Budding consists of removing a square or rectangular piece of bark from the stock and replacing it by a similar patch of bark which includes the desirable bud.

Grafting:
The different kinds of grafting are classified according to the method of placing the cion on the stock. These kinds are: (1) Root grafting, (2) top grafting, (3) bridge grafting, and (4) inarching.

Root grafting consists of placing a coin, 4 to 6 inches long, on the root or piece of a root of seedling trees. This type of grafting is used extensively in the propagation of apples and pears.

Top grafting consists of placing one, two, or four coins, each 4 to 6 inches long, on branches not thicker than 2 to 4 inches in diameter. It is used to change from one variety of fruit to another variety. The cleft graft, bark graft, and notch graft are used in top grafting.

Bridge grafting consists of inserting one-year-old coins above and below injured areas of trunks or limbs. Each year many trees are girdled partially or completely by rodents or by mechanical means. The bridging of the injured area saves the tree. The cions usually are collected during the dormant season and are inserted in the tree when the bark begins to slip.

Inarching consists of uniting the stems of two separate plants while they are growing on their own roots. In the inarching of fruit trees a seedling tree is planted beside an old tree. When the seedling tree has become established, the stem is inserted in the trunk of the old tree. In the inarching of certain evergreens, the plants used as stocks are potted and placed close to the plants which are to be used as coins. The bark on one side of the stem of the stock is sliced away for a distance of 1 to 2 inches.
3) Layerage:

Layerage consist of supplying favorable conditions for the rooting of stems while they are attached to the plant. The part of the stem which is to produce roots should be kept warm and moist.

Layerage is usually accomplished by covering the stem with moist soil or peat. A particular advantage of this type of propagation is that the parent plant supplies the layered shoots with carbohydrates, hormones, water, and nutrients until the buds develop sufficient roots and leaves to take care of themselves. When the young shoot has developed sufficient roots it is severed from the parent plant. The principal kinds of layerage are: (1) Tip, (2) mound, (3) trench, and (4) pot or air.

Tip layering consists of drawing a shoot to the earth and covering it a short distance behind the tip with soil. In some cases the entire tip is covered with soil through which the new shoot grows.

Mound layering consists of cutting back the stems of the plant in the spring and covering the stubs with a mound of soil. In this way the new shoots which develop from the stems produce roots in the soil. These new shoots usually are removed the following fall or spring and are set out as separate plants.

Trench layering consists of placing a stem in a shallow trench. When the new shoots are a few inches long, soil is pulled around them and again at frequent intervals until the trench is filled.

Pot or air layering consists of surrounding the stem of the plant with soil or moss held in place by a split-pot or box. In general, the stem is girdled to facilitate the production of roots just above the girdle. When the roots are well developed the stem can be severed from the parent plant. In general, pot layering is very troublesome and is used only on choice and indoor plants.

4) Separation and division:

The formation of new individuals by separation and division consists essentially of separating or dividing parent plant parts which in turn produce new individuals. Separation consists of removing natural vegetative entities such as bulbs or corms. Division consists of cutting or dividing fleshy storage organs, chiefly rhizomes and tubers.

Bulbs: A bulb is a short thickened stem surrounded by a group of fleshy basal leaves. The scales of the bulbs are the fleshy leaves. Roots arise from the basal portion of the bulb known as the stem plate and
shoots arise from the nodes of the stem. In many cases small bulbs form around, on top, or at the base of the mother bulb. When the bulbs are removed from the soil, the young bulbs are separated from the old bulbs and are planted separately the following season. Easter lilies certain onions are propagated in this way.

Corms: A corm is a solid structure. They produce small corms in the soil in much the same way as bulbs produce small bulbs. These corms, sometimes called cormels, are handled in the same manner as small bulbs. Gladiolus and crocur produce corms and are, of course, propagated by the planting the small cormels.

Tubers: A tuber is a short, thick, fleshy underground stem with scale like leaves subtending eyes or nodes. Examples are the tubers of the potato and Jerusalem artichoke. Shoots arise from the eyes and developed into independent plants. In the propagation of the potato large tubers are cut into several pieces. Each piece has one or more eyes and stored food, chiefly starch, for the nourishment of the seedling plant.

Fleshy roots: Some horticultural crops develop thick, fleshy roots. These roots are used to propagate the plants asexually. An example is the fleshy roots of sweet potato. Shoots arise from adventitious buds which develop into young plants. The root system of the plants arises from the nodes of that portion of the stem underneath the surface of the soil. For the rapid development of the young plants the fleshy roots are bedded in various types of hotbeds. Relatively high temperatures and moist bedding media are maintained.