The diamond pythons, scientifically named Morelia spilota spilota, are large pythons that prefer cold climates, they prefer the cold probably the most out of all Australian snakes. The majority of scales on diamond pythons are usually black and this has been suggested as an adaptation of the diamond python to keep warm efficiently. They are amply found in the south eastern regions of Australia that have a very cold winter period.

Like most carpet pythons, Diamonds are moderately sized, the female pythons can grow up to two meters and the males fall short by around 30cm. The colours and patterns of diamond pythons differ among various specimens, most commonly varying from black and white to black and gold.

Captivity:

A fully mature diamond python requires ample space and a minimum enclosure size of around $50 \times 18x18$ inches is required. One enclosure should be large enough to hold two pythons, although this is rarely recommended as it can cause fighting. If the enclosure has more room than what is minimally required, the diamond pythons perform various exercises inside them, as these species are naturally active. 

One problematic condition affecting diamond pythons commonly is obesity which like in man, occurs due to excessive feeding. You can stimulate your python to move around by having two distinctly different temperatures within the enclosure (which is recommended with any python, to give them a choice to thermoregulate) so that these pythons will lose weight simply by gliding in between the two regions. The two temperatures can be achieved by the use of heat lamps that are periodically and alternatively switched off to create two thermally different regions.

Providing some form of elevation for these pythons will make them feel very secure as they are naturally arboreal beings. Therefore various twigs, branches and pieces of bark can be used either for elevation or as a hiding place and generally just to make them more comfortable. The floor of the enclosure is best lined with paper, however reptile carpet, sand or any of the reptile-friendly barks or litter can also be used. Newspaper is the best, all-round substrate as it can be replaced cheaply and easily and is the most hygienic option.

A bowl made of a heavy material should be used for the purpose of providing water and must be placed in the end, opposite to which the heating apparatus is placed. Some diamond pythons will spend unusually long intervals in water at certain periods. We can usually conclude from this that the snake is preparing itself for shedding. But make sure you cross off the other causes for this, such as mites.

Diamond pythons usually require temperatures in the range of 28 -30 degrees, above which they will move seeking colder temperatures. However at night the temperature may be reduced significantly in order to stimulate its particular night time behaviors often exhibited by pythons living in natural habitats.

Diamond pythons require a large supply of vitamin D that is needed for the development of bones and general growth. In the natural habitat, the reptile obtains this vitamin by exposing itself to sun light. However when held captive this vitamin might be provided by using incandescent UVB fluorescent lights that can be bought without much difficulty from a pet store. Alternatively, supplements of Vitamin D may be mixed with their food periodically.

Feeding:

These reptiles are essentially carnivorous and in their natural habitats consume small reptiles and marsupials. However when captive, they are fed on rats and mice like most other pythons. Day old chickens may also be fed to diamond pythons and can be bought from chicken farms or breeders. Diamond pythons, that are fully mature, need to be given food once every 7-15 days. The younger ones however must be fed more often, usually about every five days until fully mature.

Breeding:

Usually, diamond pythons breed every once in three years, because in order to breed, the female python must
have a body mass that is good enough to help her lay eggs successfully and to also bear the rigors of incubation and pregnancy. While in captivity, breeding might be encouraged to occur every year or other year.

Following hibernation, the female, after consuming a couple of meals will shed her skin and prepare for breeding. In natural habitats, diamond pythons mate in the months of August to October. The sexual arousal can be physically observed in the male python that will frantically pace the enclosure due to being aroused by the scent given off by the female pheromones. Breeding takes about one to one and half months, after which the male begins to lose interest in the female python. At this stage it may be safe to separate the two pythons. Some females might continue to eat until they are ready to lay their clutch of eggs. Around 65 days from the day of breeding the female will lay eggs, often numbering between 15 and 40, the average being 20. The eggs weigh 41.1g approximately and like the other members of the python family, hatch when in areas where the humidity is quite high.