

# GREEN COMPUTING AND ITS APPLICATION

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# Introduction

- ▶ **Green computing** is an emerging concept towards reducing hazardous material and to save our environment from harmful impacts of the use of **computers** and other electronic products.
- ▶ **Green Computing** is concerned with the manufacturing, using and disposing of **computers** with no impact on environment.
- ▶ **Green computing** is the emerging practice of using **computing** and information technology resources more efficiently while maintaining or improving overall performance.



# How Support Green Computing helps the Environment

- ▶ **Green computing** represent a responsible way to save lot of energy and secure our **environment** from the harmful impacts of **computers** and its devices. .
- ▶ Therefore, the emphasis is to reduce the energy utilization and carbon footprints and increase the performance of **computing**.
- ▶ **Green Computing** involves reducing the **environmental** impact of technology.
- ▶ That means using less energy, reducing waste and promoting sustainability.
- ▶ **Green computing** aims to reduce the carbon footprint generated by the Information Technology and Systems business and related industries

# Advantages of Green Computing

- ▶ Sustainable computing means reduced **energy** consumption that leads to reduced GHG **emissions** and fossil fuel usage.
- ▶ Green computing is **cost**-effective due to less **energy** usage & cooling requirements.
- ▶ Sustainable IT helps in the preservation and effective utilization of natural resources.
- ▶ It encourage reuse and recyclability that will result in a lesser number of electronic wastes.
- ▶ Green IT uses non-toxic components which do not pose any health hazard to the end-user.

# Disadvantages of Green Computing

- ▶ The initial implementation is costly.
- ▶ Frequent change in technology.
- ▶ Green IT cause more burden to an individual.
- ▶ The disparity in the level of understanding across various companies, professionals and end-user.
- ▶ Fewer courses and publications related to green computing.



# Application of Green Computing

- ▶ Green Cloud Computing in Energy Efficiency:- Cloud computing is a highly scalable and cost-effective infrastructure for running HPC, enterprise and Web application.
- ▶ Green wireless Network :- Advance in networking, caching and computing will have a profound impact on the development of next generation green wireless network.
- ▶ Green Parallel Computing of Big Data Systems :-Big Data is typically organized around a distributed file system on top of which the parallel algorithm can be executed for realizing the Big Data analytics.
- ▶ Preemptive Priority Based Job Scheduling Algorithm in Green Cloud Computing:-Green Cloud, a packet simulator focuses on maximizing the system throughput with saving energy on different servers.
- ▶ Green cloud computing using genetic algorithm:-Cloud computing delivers consumers a proficient way to efficiently complete their service demands.

