

## SOFTWARE, DB, WEB

1. Spiegare il funzionamento di un sistema di versioning
2. Spiegare il funzionamento di un sistema di log
3. Dopo aver scritto il codice di un software ci si accorge che restituisce il risultato corretto ma l'esecuzione risulta molto lenta, quali accorgimenti si possono adottare per migliorare le performance?
4. Quali sono le principali caratteristiche di un database relazionale?
5. Spiegare la differenza tra archiviare i dati su file o in un db relazionale
6. Descrivere un'architettura client/server
7. Cos'è un web service?

## SISTEMI, RETI, SENSORI

1. Spiegare la gestione dei processi di un sistema operativo a scelta
2. Quali sono i principali vantaggi e svantaggi nell'utilizzo di una infrastruttura CLOUD con lo scopo di archiviare alcuni Terabyte di dati scientifici?
3. Si deve amministrare un server installato fisicamente in una sede di lavoro situata in un'altra città: quali software o meccanismi useresti per l'accesso remoto a tale sistema?
4. Qual è la principale differenza tra un IP pubblico ed un IP privato?
5. Descrivi le caratteristiche principali di un router e di uno switch. A che livello di rete operano e in quale contesto potresti utilizzarli?
6. Descrivi tecniche, tecnologie e modalità per il monitoraggio remoto di strumenti e sensori
7. Quali parametri si potrebbero monitorare a distanza, al fine di garantire la buona funzionalità nel tempo di alcuni strumenti installati in luoghi remoti per il rilievo di parametri ambientali?

## INGLESE

1. Visitors of all ages will be given the opportunity to find out more about natural hazards, climate change, the ocean, and marine biodiversity. This will be a great opportunity to understand the importance of scientific research and technology not only for the future of humankind, but also for that of other species and of the entire planet.
2. Since this year, the European Commission has been working on developing a common European Union approach to planning observation activities of the seas and oceans. The aim is to collect data once and use it for different purposes. To this end, an expert group has been set up to advise the Commission. The experts act as a point of contact for all government agencies in the EU countries involved in marine observation.
3. The work aims to identify potential differences in the distribution of the nine types of commercial interest in order to assess changes in resource distribution under future climate change scenarios. The approach allows us to take into account the possible geographical changes of the observed species and to support the definition of management plans for a sustainable use of fish resources in the future, taking into account the directions of change.
4. The area studied by the project is a key area for understanding the interaction between the geological processes associated with the movements of the lithospheric plates and the evolution of the Antarctic ice sheets. According to initial analyses, the volcanism appears to be geologically recent, but its origin and age have yet to be precisely determined.
5. The project aims to define a methodology to integrate different types of data, including citizen-collected data and satellite imagery, into a dynamic exposure database. This database can then be used to improve the risk assessment of natural disasters such as earthquakes, landslides and floods.

6. On the occasion of this anniversary, we would like to invite you not only to join one of the proposals of the "Decalogue for a sustainable future", but also to share with you our good habits of energy saving and energy efficiency that we can apply in the office to be more conscious of resources even while working.
  
7. Understanding the variability of the Antarctic and Arctic ice caps is essential for determining future sea level rise projections. A research group of 29 international experts, including the OGS, has mapped the state of knowledge on the variability of the polar ice caps and concluded that a better understanding of the sensitivity of the ice caps to past and future climate change is needed to predict sea level rise.