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| Name of University/Institution | Institute of Space Technology | | Physical Address: | 1, Islamabad Highway, Islamabad. P.O 44000 |
| Telephone & Fax No: | +92-51-9075100&  +92-51-9273310 | | Department Name: | Space Science |
| City: | Islamabad | | Province: | Islamabad Capital Territory (ICT) |
| **Nominated Project Details:-** | |
| Project Supervisor Name and Designation: | Ms. Aneeqa Abrar  Dr. Hamamd Gilani | | Contact Details: | Email:  [aneeqa.abrar@gmail.com](mailto:aneeqa.abrar@gmail.com)  [Hammad.gilani@grel.ist.edu.pk](mailto:Hammad.gilani@grel.ist.edu.pk) |
| Project Supervisor Qualification: |  | | No of Publications of Supervisors: |  |
| Students Name(s): | 1. Akram Ali Shah  2. Syed mustafa Haider | | Students Mobile No: | 03361037005 |
| Students CGPA | 1. 2.47  2. 3.56 | | Students Email: | [1. akramalishah@gmail.com](mailto:1.%20akramalishah@gmail.com)  2.mustafa.haider2011@gmail.com |
| Degree Program/ Title: | BS Space Science | | Area of Specialization: | Space Science(Web GIS/RS) |

**Final Year Project Details:**

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| 1. **Project Title:** | | | **A Web GIS Application for Integration of socio-economic, biophysical and atmospheric variables: A case study of Punjab** | | |
| 1. **Project Start Date:** | | | **10/12/2019** | | |
| 1. **Project Finish Date:** | | | **10/06/2020** | | |
| 1. **Project Summary (less than 200 words)** | | |  | | |
| This study aims at development of a web portal to facilitate data analysis and presentation. For this study, the Population, Atmospheric pollutant gasses (No2, SO2, and Co2 etc.) along climatic variables e.g. Temperature, Precipitation etc. Over the entire Punjab at the district level, the temporally compiled data will be presented in the form of graphs and spatial maps. The dynamic nature of these maps and graphs shall facilitate in-depth study of relationship between different variables over a period of time (2000-2020) The web portal shall be designed following the rules of user usability and user experience. | | | | | |
| 1. **Project Objectives:** | | |  | | |
| The main objective of this project is the development and utilization of a web portal, which would be used as an information system for the spatiotemporal analysis and presentation (maps and graphs) of terrestrial and atmosphere geospatial data over the entire Punjab province. | | | | | |
| 1. **Project Implementation Method** | | |  | | |
| * Acquisition of spatiotemporal data from archives (Sentinal-5P, World Population, TRMM) * Analysis and presentation of data through the creation of thematic maps and graphs * Development of a web-GIS portal. | | | | | |
| 1. **Key Milestones of the Project with Dates** | | |  | | |
| **S.No.** | **Elapsed time since start of the project** | | **Milestone** | | **Deliverable** |
| 1. | 2-3 weeks | | Literature review | | Summary of the work done in relevant field |
| 2. | 2.5 months | | Data collection | | Collection of satellite data products |
| 3. | 3 months | | Analysis of data/creation of thematic maps | | Thematic maps and graphs |
| 4. | 3 months | | Web portal designing and development | | web portal |
| 5. | 2 months | | Writing thesis and research paper | | Thesis |
| Please add rows if required | | | | | |
| 1. **Final Deliverable of the Project:** | | | (Please tick one of the following) | | |
| Hardware System | | Software System | | HW/SW integrated system | |
| Software Simulation results | | Comparative Study | | Theoretical Design/Architecture | |
| Simulator Design | | Other Please specify | |  | |
| 1. **Please Specify Technical Details of Final Deliverable** | | |  | | |
| **The following programming languages will be used:**  HTML and CSS along with JavaScript would be used for web designing and development of web portal.  **Data collection:**  Data would be collected mainly in the form of satellite packages. Hence we would be dealing with shapefiles, csv files, rasters and etc. The data would be collected through websites like Un oucha from which data like population would be downloaded in .csv or .xls format while Nasa appears would be used for downloading data packages  **Software utilization:**  The thematic maps would be created through the use of software’s like QGIS and etc. | | | | | |
| 1. **Equipment required for making prototype/working model:** | | | (Please indicate in tabular form the required equipment’s along with estimated cost) | | |
| Computing facility for web development purposes. | | | | | |
| 1. **Benefits of the Project** | | | (Please specify Direct/Indirect beneficiaries) | | |
| The basic benefit of the project are as follows   * **Support real-time spatial analysis** * **Access web maps from any device remotely** * **Helps in decision making** * **Increases accessibility of data** * **Low cost** * **Reduce lead times** | | | | | |

It is certified that the FYP titled “**A Web GIS Application for Integration of socio-economic, biophysical and atmospheric variables: A case study of Punjab** “has been approved and is being undertaken by the above mentioned students as their Final Year Project.

It is undertaken that the undersigned have understood the “terms & conditions” of the program, and further reiterate that, if the subject FYP is approved for funding, the disbursed funds shall be utilized as per “terms & conditions” and the undersigned will be liable to reimburse/refund the unutilized amount and other cost not approved by the IST , if any.

It is further undertaken that after utilization of funds, the said “Fund Utilization Report” shall be furnished along with the other required deliverables as and when required by the IST.

1. Name, Designation& Signature of Supervisor:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1. Name & Signatures of HoD: |  |