



Ain Shams University Racing Team

Information Technology Plan

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Vision

Create an environment that will enable us to achieve our technical targets, invest in our team members and leave a healthy and fully functioning system for the next year's team that is ready to be taken to the next level

Objectives

Migrate the old system to from Django to the MEAN stack, while ensuring that all members gain maximum benefit and gain skills from both the technical and non-technical experiences they will undergo as part of the team, skills that will benefit them both on a professional and personal levels in their future endeavors.

Job Description

Executing the technical objectives set out for the year:

- Evaluate the old system and fix any issues
- Migrate from Django backend to Node

While helping, counseling and guiding the team members, assigning tasks and responsibilities and investing in future leaders to ensure they gain the maximum benefit.

Feedback on Previous Phase

Some of the earlier meetings were very long and thus tedious, moreover the lack of any clear hierarchy and its vagueness combined with no clearly set objective at the beginning was confusing.

However, I have witnessed a great and motivated team so far that is willing to put in the work and the time necessary for the team, which leads me to believe that we will achieve any set targets and will leave a fully functioning system and environment for the future team to build on.

SWOT Analysis

<h2>Strengths</h2> <ul style="list-style-type: none">• Strong and talented team• Great available resources and references so any team member can choose the most suitable resource for him/her• Lack of face to face meetings should not be a problem, as all of our work is on the software side and does not require any significant adjustments. It is also more convenient.	<h2>Weaknesses</h2> <ul style="list-style-type: none">• No older team members with team experience• Lack of clear plan so far• Very short time to achieve targets due to late start of the year
<h2>Opportunities</h2> <ul style="list-style-type: none">• Extended period of time with reduced pressure and more free time from university that can be correctly utilized for the team.• There is already an existing system which can act as an outline and a reference for a newer system, and means we do not have to start from scratch	<h2>Threats</h2> <ul style="list-style-type: none">• Uncertainty about the current state of affairs especially academic wise is stressful and could cause confusion and slow progress.• Lack of constant feedback could make some team members unmotivated and uncommitted

Risk Assessment

1. Cancellation of Season

This is a **very low probability** as the work of the management department is independent of any competition thus, the recent cancelations have no effect on our work. In fact, our work is needed now needed more than ever to keep up the spirits of the team in preparation for a very strong comeback in next year's completions

2. Academic pressure and extra load

This is an **Extremely High** Risk.

Due to the current health crisis and moving from the conventional physical learning process to an online medium, there has been a great deal of confusion, that unfortunately, still persists. During this period many professors have been asking a greater amount of work from their students which requires a lot of time and adds pressure, while on the completely opposite end some have totally ignored their students and have gotten no work achieved so far, and with a very high probability they will scramble at some point and ask a humungous amount of work from their students in a very limited period of time.

Risk Mitigation: this risk can be avoided by supporting the team members not just in their IT team's work but also in their academic work whenever possible and encouraging them to help each other. Likewise, it is very important not to add more pressure on the members, while at the same time, it is as important to ensure that all tasks get done and they are benefiting from the team.

Criteria of Specialists

- The ideal candidate for the team is mainly identified by being hardworking, dedicated and most importantly a team player.
- Each member must be open to new experiences and eager to learn new things, this will prove to be very important in this learning phase so that we can finish it as soon as possible.
- Members must strive to finish their tasks and expected milestones in time, and even though there should be some flexibility and understanding from the team leader, a member can not take advantage of this.
- It is very important that members put their best on finishing their tasks and not give up easily, in trying to find the answers by themselves first before coming to ask for help.
- Communication between team members is also crucial to a smooth and effective workflow and must be able to reach compromises if necessary and help their fellow colleagues.
- During work it will be expected from a member to work more closely on the areas in which they are best, however, they will also be expected to improve on their weak points, being okay to learn from their fellow teammates and also being open to constructive criticism.

Work relation in details with other administrative departments

Inter-departmental communication is a key component of any successful organization, and I believe the ASURT is no different. It is very crucial to have a coherent team and maintain a coherent image for our members and fans, this can be achieved by having constant communication and clear responsibility and accountability for interdepartmental operations on conjoint projects.

All communications will be carried out mainly by the team leader, however, team members should also be able to communicate when there is work that requires constant input and changes.

Events Department

a. Marketing Campaigns and Offline events

We will be heavily collaborating with both the media and PR teams during any campaign to host any material on our website to promote the event.

b. Website Design

The website design mainly comes from the media team and it is our responsibility to transform their blueprints into an actual responsive design that will be displayed on our website.

c. Search Engine Optimization – SEO

It is our plan to add SEO to our optimization in collaboration with our marketing efforts to increase the publicity and reach of our team, especially to external parties, not just outside of the team or the university but from all over the world.

The SEO efforts will be coordinated with the PR team to work in conjunction with any ongoing marketing campaigns or events.

HR Department

I believe that there is always more room for improvement and working with the HR department to assess ourselves and find any areas of improvement is a very important part of our strategy.

Sales Department

Our work with sales is very unique and very important. We will cooperate with the sales team to showcase our successes, achievements and most important partnerships to showcase our financial success, and most importantly help them in attracting more sponsors and sealing new financing for the team.

Scope Management Plan

Due to the cancellation of all competitions this year our expected work will be mainly on the recruitment campaigns that will be launched for next year, and on any marketing campaigns that will be coordinated with the sales team.

Our work in the recruitment campaigns will be divided into three phases:

Before the campaign: get the website up and running and especially getting familiar with the registration portal and preparing for any potential risk and prepare for the expected number of applicants. Likewise, coordinate with other teams to accommodate any special requests in the registration system.

During the event: keep the system under constant supervision and be prepared for any failures or any requested changes.

After the event: assess the success of our system and find any areas of improvement.

Communication and reporting plan

I believe that clear and concise communication is one of the most important things for any type of group effort and is one of the main keys of success to any endeavor, and our team is no different.

During this rough period the main medium of our communications will be through online video meetings, text and most importantly emails, any communication will be very well documented and in case of meetings a brief about the meeting will be recorded afterwards. These guidelines will be applied to all types of communications.

Communication and reporting system with GOAs

Communication with upper management is very important as part of our responsibility and accountability as a crucial part of the team.

I believe weekly email updates and a monthly video conference will be enough to keep them updated and give feedback on the team and receive any news or instructions.

Communication and reporting system with other department senior officers

Communication with other department heads can be conducted through any medium that will be specified beforehand, however, the GOA will be kept updated and aware of any meetings and any decisions taken.

Communication and reporting system with technical team

Communication with team members is very important and I will have two main approaches:

- Informal communications via text; this casual medium is very important to be closer to the members and make them feel heard and closer to the leader, so that they will not hesitate to contact me at any time for any reason, whether it be technical support or a personal matter.
- Formal communication via email where tasks will be sent and received in a well-documented and monitored manner.

Moreover, I will carry out weekly video conferences for any technical support or task feedback. This will also be important in increasing morale and raising the team spirit.

Time Plan

Milestones for the year

- Finish learning phase
 - a. Finish front end learning phase
 - b. Finish back end learning phase
- Extensive study and maintenance of old system
- Migrating to the new platform

Detailed Time Plan

April 20 th – May 15 th	Finish remainder of angular course and end front end learning phase
May 15 th – June 30 th	Finals period (so far)
July 1 st – July 21 st	Django course
July 22 nd – August 10 th	Express and MongoDB courses
August 10 th – August 30 th	Review of old system and maintenance to get it back working
September	NodeJS (and SEO if it is decided) courses and start migrating the system to the new platform. Prepare the system for recruitment campaigns.

Due to the current confusion about the current state of affairs, it is very likely that the dates in this plan will change and the period allotted for the finals could be greater or less than needed, however, the time periods themselves will not be changed and it is our top priority to get the old system back working first, then secondary migrate it from Django to node.

Management Strategy

Investment in members is one of the top priorities of the team, and so is delivering output of the highest quality. My strategy to strike a balance between these two things is:

- Constant encouragement for the team members to present their own ideas and contribute to decision making, this will only further their investment and passion for the team's work.
- Provide constant support to members whether it be technical support or personal encouragement and motivation.
- Be tolerant to mistakes and allow time for learning from them and improving on the current output.
- Any criticism should be constructive in nature and delivered in a way that is personal and adjusted to each team member, and of course, delivered in private to each individual.

Moreover, in relation to external events these will be the main guidelines to follow:

- Always be prepared for any external event and adjust plans accordingly
- Have backup contingency plans in case of any scenario, this is very important especially with the current confusion that affects all the members.
- Be more flexible in deadlines and adjust them to leave space for any sort of emergency that might affect any member or the team as a whole. However, this will not affect the final output and will not prevent us from achieving our goals.

Internal Management Strategy

Conducting Meetings

Meetings will be conducted on a weekly or bi-weekly basis and their main purpose is to receive feedback from members, update members on each other's work and team's overall progress and to give technical support if needed.

Meeting announcements will be sent over text, and meeting minutes will be prepared directly after the meetings to avoid any confusion and for documentation.

Distributing Tasks

The main basis behind distributing tasks will be striking a balance between giving each member a task that they are very good at and will achieve with the highest quality in the shortest period of time, and, distributing tasks fairly so that each member will gain a complete experience in all areas of work and will improve any weak points they might have.

Deadlines for the tasks will be set very clearly from the beginning and even though there will be some flexibility, being late or delivering a half-baked task just to be on deadline will not be accepted. There will be a system in place to handle unsatisfactory tasks that will consist of 3 strike.

On the first and second strikes there will be a verbal warning, on the third strike a written warning will be delivered and the HR will be notified just to be aware of the situation. The next time the member will be referred to the HR department.

Handling Specialists

I believe that the handling of members should be a personal process, that promotes mutual trust with the member and builds a personal relationship. I believe this will not just make the members more invested in their work but will also encourage them to give their best and promote to the team spirit and better communication.

This will play an important role in delivering on tasks and deadlines and will also help me personally have a better insight while dividing tasks and setting deadlines.

Investment Plan

This is a very important part of the team's long-term strategy, and especially with the limited time we have this year this might be crucial to see our vision come to life even after this year is done. The main guidelines in investing in our human assets are as follows:

- Focus more on team members who are more likely to continue in the racing team as a whole and in the IT team especially beyond this year, and, give more attention to their development and learning.
- Involve members in the decision-making process and encourage new and innovative ideas
- Delegate responsibilities to members and observe who is better at handling more responsibilities and delivering on their team's work
- Rotate different tasks and responsibilities between all members so that each member has a more holistic and deep understanding of all areas of work.

Motivation & Appreciation Strategy

Motivation and appreciation are very important in driving members forward and pushing them to create better work and contribute more to the team. I believe that appreciation should be done both individually in private and in front of the whole team to encourage the members. Likewise, members can be motivated by added responsibility by assigning leaders for certain tasks and periods, that will be rotated.

Documentation Strategy

- All emails and communications will be documented in a monthly document that includes all distributed tasks, the quality and punctuality of received tasks, all decisions reached during meetings and members feedback.
- Use a project management software to document and stay updated on timelines and targets i.e. Trello
- Use a ticketing system to raise issues in the software and document its resolving, this will help in both documenting old problems and how they were resolved besides documenting them
- Thoroughly document decision process and why we arrived at each decision for future references

Web Development timeline

- a. Assess the front end of the current system and gain a deep understanding of it
- b. Assess the back end of the system
- c. Fix any issues with the old system and get it back online
- d. Make a complete assessment of the old system and determine required changes in order of priority and importance to the system.
- e. Start migrating the old system from Django to Nodejs and implement the desired changes
- f. Take down the old version and put up the new version of the website after extensive testing
- g. If possible, add SEO to our website

However the changes could just be added fully functioning and online to the old system on Django if there is no time to migrate the entire system to Node before the year is over, as our top priority is to have a working system at the end.

Training phase plan

- a. HTML and CSS – completed
- b. Bootstrap – completed
- c. Front End framework: Angular – current
- d. Back End framework: Django
- e. DBMS: Express and MongoDB
- f. New Back end: Node
- g. Extra: SEO

After finishing each course, and during taking the next, there will be mini tasks of assessing parts of the old system that the members have already studied its technology, this will serve two purposes: accelerating the assessment and understanding of the old system and preventing the members from forgetting past stages in the learning phase.

Ideas for Future Systems

- Create a mobile app for the team
- News board for the whole team and for specific teams to keep all members updated and involved
- Create a message board to encourage members to socialize and raise team spirits
- Use a resource management software to track and optimize manufacturing resources, logistics and the supply chain for the technical teams
- Design new Knowledge databases for technical teams to help standardize their practices which will help eliminate future errors and help future teams get off the ground as fast as possible while avoiding past mistakes
- Use Customer relationship management software for the sales and logistics teams to document all interactions with external parties (sponsors, suppliers, customers...etc.)
- Use a ticketing system to document all communications between different departments

Development Strategy - Gathering System and User Requirements

- Since our system is on a small scale and the requirements can be gathered easily by conferring with the upper management and other team leaders, the user requirements will be gathered easily and without any trouble.
- During the maintenance phase of the old system we will refer mainly to the plans and blueprints of this system first and also study its code base.
- When migrating to the new system we will work off the same plans as there will be no major changes, while adjusting for any minor changes we need to add or adapt for Nodejs.

Ideas for Systems to Be Developed in Collaboration with Other Departments

Due to the tight schedule this season we will not be able to undertake major projects in conjunction with other teams; however, we can undertake small projects such as small static web pages to carry important information or documentation.