Testing documentation for the Automation of Fetching of publications on the R&D website of our institute

Functional Requirement 1-
Total publications of a particular author.
Sample test cases are all the authors of the institute.The Oracle has been chosen as the [IRINS](#)
Website as it contains exhaustive data related to Authors and publications.

Test Author	Test parameter	Oracle-IRINS Website	Accuracy in %
Name	Publications retrieved via API (Scopus)	Publications on IRINS	
Ashish Rajak	13	11	100
Abhijeet Balwantrao Joshi	53	53	100
Abhirup Datta	99	128	77.34375
Abhishek Rajput	29	32	90.625
Abhijit Ghosh	71	160	44.375
Ananya Ghoshal	1	19	5.263158
Ajay Kumar Kushwaha	79	78	100
Abhinav Kranti	196	194	100
Amrendra Kumar Singh	31	32	96.875
Akshaya Kumar	20	19	100
Ashisha Kumar	9	7	100
Aman Khurana	23	24	95.83333
Alestin Mawrie	10	10	100
Ankur Miglani	42	42	100
Amit Shukla	59	170	34.70588
Amit Kumar	8	247	3.238866

Amod C Umarikar	40	39	100
Anand Parey	83	82	100
Anand Parkash	5	5	100
Aniruddha Singh Kushwaha	33	27	100
Anjali Rao	0	0	nil
Anjan Chakraborty	69	69	100
Ankhi Roy	474	489	96.93252
Balasubramanyam Appina	24	32	75
Akshay Pratap Singh	17	21	80.95238
Apurba Kumar Das	119	115	100
Md. Aquil Khan	28	29	96.55172
Aratrika Das	0	0	nil
Mohd. Arshad	44	43	100
Aruna Tiwari	117	114	100
Ashootosh Sakharam Mandpe	23	25	92
Anirban Sengupta	227	228	99.5614
Ashok Kumar Mocherla	3	10	30
Avinash Sonavane	79	75	100
Abhishek shrivastava	48	48	100
Ayan Mondal	44	44	100
Ramu Baadiga	0	0	nil
Dudekukla Althaf Basha	20	21	95.2381
Bibekananda Maji	27	25	100

Biswarup Pathak	265	264	100
Bhupesh Kumar Lad	46	46	100
Bodhisatwa Mazumdar	48	50	96
Bhargav Pradeep Vaidya	54	68	79.41176
Chandan Halder	14	14	100
Chandresh Kumar Maurya	11	10	100
Charitha Cherugondi	6	6	100
Chidella Upendra	1	1	100
Chelvam Venkatesh	56	52	100
Dipankar Das	0	33	0
Dan Sathiaraj	22	22	100
Debopriya Mukherjee	9	9	100
Dhirendra Kumar Rai	29	28	100
Dipak Kumar Roy	42	56	75
Suhas S. Joshi	222	214	100
Dishari Chattaraj	8	17	47.05882
Devendra Deshmukh	50	48	100
Pravarthana Dhanapal	27	3	100
Dibbendu Roy	0	0	nil
Debajyoti Sarkar	26	31	83.87097
Eswara Prasad Korimilli	27	27	100
Mohd. Farooq Azam	37	35	100
Ganti S. Murthy	91	52	100
Girish Chandra Verma	18	13	100

Gourab Sil	19	19	100
Gourinath Banda	20	20	100
Guru Prakash	26	20	100
Hemant Borkar	19	22	86.36364
Hari Hablani	91	90	100
Hem Chandra Jha	139	189	73.54497
Hitendra Kumar	25	28	89.28571
Indrasen Singh	31	31	100
Janakiraman S	21	21	100
Jayaprakash Murugesan	37	37	100
Kapil Ahuja	31	32	96.875
Kaustav Bakshi	19	20	95
Kalandi C Pradhan	14	20	70
Bapan Ghosh	32	32	100
Khushuboo Devi Tiwari	0	19	0
Kiran Bala	36	36	100
Krishna Mohan Kumar	25	46	54.34783
Harekrishna Yadav	33	31	100
Krushna R. Mavani	73	75	97.33333
Shailesh Kundalwal	101	97	100
Kedarmal Verma	5	7	71.42857
Vivek Kanhangad	53	50	100
K V Vamsi	21	26	80.76923
Lalit Borana	40	40	100

Lokesh Kumar Dewangan	6	9	66.66667
Lokesh Basavarajappa	32	34	94.11765
Manavendra Mahato	10	10	100
Manoneeta Chakraborty	37	36	100
Mayur Shirish	27	25	100
Mrigendra Dubey	42	37	100
Manish Kumar Goyal	135	127	100
Mohanasundari Thangave	3	16	18.75
Mritunjay Verma	15	45	33.33333
Mirza Saqib Baig	70	68	100
M. Tanveer	190	170	100
Mukesh Kumar	15	138	10.86957
Nagendra Kumar	18	21	85.71429
Narendra Nath Patra	30	30	100
Neelima Devarakonda Satyam	109	106	100
Neminath Hubballi	72	67	100
Niraj Kumar Shukla	21	20	100
Nisheeth Kumar Prasad	12	12	100
Neelesh Kumar Jain	145	217	66.82028
Naresh Kumar Kumawat	12	12	100
Nirmala Menon	21	19	100
Neeraj Mishra	7	9	77.77778
Narendra S. Chaudhari	198	199	99.49749

Onkar S. Game	47	8	100
Ram Bilas Pachori	296	307	96.41694
Iyamperumal Anand Palani	209	201	100
Parimal Kar	73	73	100
Preeti Anand Bhobe	64	63	100
Pavan Kumar Kankar	137	141	97.16312
Prashant Kodgire	30	30	100
Prabhat Kumar Upadhyay	128	139	92.08633
Parasharam Maruti Shirage	246	245	100
Pritee Sharma	34	35	97.14286
Priyamvada .	0	0	nil
Priyank Sharma	28	32	87.5
Priyansh Singh	6	7	85.71429
Pankaj R. Sagdeo	135	133	100
Priyanka Singh	0	0	nil
Puneet Gupta	42	35	100
Abhinav Raghuvanshi	29	28	100
Raghunath Sahoo, FInstP	712	1022	69.66732
Rajesh Kumar	141	292	48.28767
Rajneesh Misra	187	185	100
Ram Sajeevan Maurya	22	22	100
Ranjith Poobalan	9	11	81.81818

Ranveer Singh	14	18	77.77778
Rinkee Chopra	16	19	84.21053
Ritunesh Kumar	60	88	68.18182
Ruchi Sharma	42	45	93.33333
Rupesh S. Devan	135	136	99.26471
Sk. Safique Ahmad	14	16	87.5
Saikat Sarkar	24	23	100
Sampak Samanta	84	85	98.82353
Sanjram Premjit Khanganba	13	38	34.21053
Sansuma Brahma	1	2	50
Santanu Manna	43	44	97.72727
Sarika Jalan	124	123	100
Debayan Sarkar	58	58	100
Satyajit Chatterjee	29	23	100
Saurabh Das	68	68	100
Satya Silendra Bulusu	41	40	100
Sandeep Chaudhary	119	141	84.39716
Dhinakaran Shanmugam	32	32	100
Selvakumar Sermadurai	37	66	56.06061
Somaditya Sen	158	189	83.59788
Saptarshi Ghosh	141	142	99.29577
Shaibal Mukherjee	1	158	0.632911
Sharad Kumar Singh	3	4	75
Sharad Gupta	73	75	97.33333

Shomik Dasgupta	1	4	25
Siddarth Savyasachi Malu	23	23	100
Sidharth Sharma	25	19	100
SIVARAJ MOHANA SUNDARAM	22	30	73.33333
Kazi Sabiruddin	26	26	100
Santosh Kumar Sahu	160	160	100
Sanjay Kumar Singh	23	228	10.08772
Santosh Kumar Vishvakarma	161	164	98.17073
Sanjeev Singh	15	14	100
Somnath Dey	50	51	98.03922
Soumen Ghosh	20	21	95.2381
Soumi Chattopadhyay	28	39	71.79487
Srimanta Pakhira	70	71	98.59155
Subhadeep Paladhi	19	22	86.36364
Satyanarayan Patel	111	107	100
Santosh Sattappa Hosmani	54	51	100
Subhendu Rakshit	29	30	96.66667
Subhrangsu Mandal	11	11	100
Sudeshna Chattopadhyay	38	116	32.75862
Sudip Chakraborty	165	177	93.22034
Suman Majumdar	52	57	91.22807
Suman Mukhopadhyay	90	90	100

Sumanta Samal	51	50	100
Sumit Gautam	39	39	100
Sunil Kumar	98	193	50.7772
Surya Prakash	81	112	72.32143
Srivathsan Vasudevan	34	32	100
Swadesh Kumar Sahoo	39	43	90.69767
Swaminathan R	61	56	100
Thapasya J	0	0	nil
Titas Chanda	40	40	100
Trapti Jain	68	68	100
Tridib Kumar Sarma	48	48	100
Tushar Kanti Mukherjee	42	43	97.67442
Umesh Achyutrao Kshirsagar	28	28	100
Unmesh Khati	26	25	100
Vimal Bhatia	371	399	92.98246
Vibhor Pandhare	0	4	0
Vijai Laxmi	7	8	87.5
Vijay A S	55	51	100
Antony Vijesh	25	26	96.15385
Vipul Singh	120	116	100
Vinay Kumar Gupta	17	22	77.27273
Vinod Kumar	75	72	100
Vijay Kumar Sohani	6	6	100
Shaikh M. Mobin	575	586	98.12287

Yuvraj Kumar Madhukar	20	19	100

Table 1

Final total publications (sum of the publications of all the authors) =14540.
Final total publications retrieved through API =12538.
Final Accuracy=86.2%.

Functional Requirement 2-
Total Publications of a particular author since their joining of the institute.
20 sample Test case authors have been chosen at random.The Oracle is the current R&D
website as publications have been added manually to it ,ensuring its correctness.

Test Author	Test Parameter	Oracle- Current R&D website	Accuracy as %
Name	Publications Retrieved via API (Scopus)	Publications on R&D Website	
Trapti Jain	57	54	100
Raghunath Sahoo	564	243	100
Ram Sajeevan Maurya	12	16	75
Abhishek Srivastava	37	17	100
Vipul Singh	106	120	88.33333
Abhinav Kranti	115	68	100
Ram Bilas Pachori	281	153	100
Santosh Kumar Vishvakarma	142	147	96.59864
Anirban Sengupta	165	213	77.46479
Ayan Mondal	6	5	100
Ranveer Singh	4	0	100
M Tanveer	157	129	100
Soumi Chattopadhyay	2	0	100

Bodhisatwa Mazumdar	24	2	100
Chandresh Kumar Maurya	3	4	75
Nagedra Kumar	8	4	100
Somaditya Sen	134	58	100
Eswara Prasad Korimilli	10	26	38.46154
Vinay Kumar Gupta	6	6	100
Bibekanda Maji	18	11	100

Table 2

Total publications on the current R&D website =6307.
Total publications (sum of the publications of all the authors,since their joining) =6814.
Hence, there is an improvement of 8.03% in addition to making the site completely automated.

Non-Functional Requirements	Result Obtained
Timing performance per API call	3.5 second on average
Total time taken to fill the entire database (1 time process)	1 hour approximately
Total time taken for weekly updation of the database(fetching recent publications).	16-17 mins on average
Scalability	Database is flexible for any number of authors and publications
Scopus API rate limits	20000 records can be fetched per week through a particular API key .In addition to this multiple API keys are being used giving a limit of ~100000 records per week.